Mobil Oil Corporation

P.O. BOX 5444
DENVER, COLORADO 80217-5444

May 14, 1986

RECEIVED
MAY 16 1986

DIVISION OF
OIL, GAS & MINING

Utah Board of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attn: R. J. Firth
Associate Director

SUPERIOR OIL COMPANY MERGER

Dear Mr. Firth:
On September 20, 1984, The Superior Oil Company (Superior) became a wholly owned subsidiary of Mobil Corporation. Since January 1, 1985, Mobil Oil Corporation (MOC), another wholly owned subsidiary of Mobil Corporation, has acted as agent for Superior and has operated the Superior-owned properties.

On April 24, 1986, Superior was merged with Mobil Exploration and Producing North America Inc. (MEPNA), which is also a wholly owned subsidiary of Mobil Corporation. MEPNA is the surviving company of the merger.

This letter is to advise you that all properties held in the name of Superior will now be held in the name of MEPNA; and that these properties will continue to be operated by MOC as agent for MEPNA.

Attached is a listing of all wells and a separate listing of injection-disposal wells, Designation of Agent and an organization chart illustrating the relationships of the various companies. If you have any questions or require additional documentation of this merger, please feel free to contact me at the above address or (303) 298-2577.

Very truly yours,

R. D. Baker
Environmental Regulatory Manager

CNE/rd
CNE8661

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
MOBIL ECPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

3. ADDRESS OF OPERATOR
P O BOX 633 MIDLAND TX 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
2063.5' FWL 487' FSL
At proposed prod. zone
SAME

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
NAVAJO TRIBAL

7. UNIT AGREEMENT NAME
RATHERFORD UNIT

8. FARM OR LEASE NAME
RATHERFORD UNIT

9. WELL NO.
21-24

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
SEC.21 T41S R24E SWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
5 MILES SE OF MONTEZUMA CREEK, UTAH

12. COUNTY OR PARISH: SAN JUAN
13. STATE: UT

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 487' SE FROM THE RATHERFORD UNIT LEASE LINE

16. NO. OF ACRES IN LEASE: 12910

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40 ACRES

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320' EAST OF 21-14

19. PROPOSED DEPTH: 6000

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GL - 4978

22. APPROX. DATE WORK WILL START*: NOV. 15, 1993

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48#	80'	111 ft^3 (Circ to Surf)
11	8 5/8	24#	1600'	540 ft^3 (Circ to Surf)
7 7/8	5 1/2	15.5#	5600	1403 ft^3 (Circ to Surf)

SEE ATTACHED 8 POINT WELL CONTROL PLAN FOR ADDITIONAL DRILLING INFORMATION

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 9-24-93

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

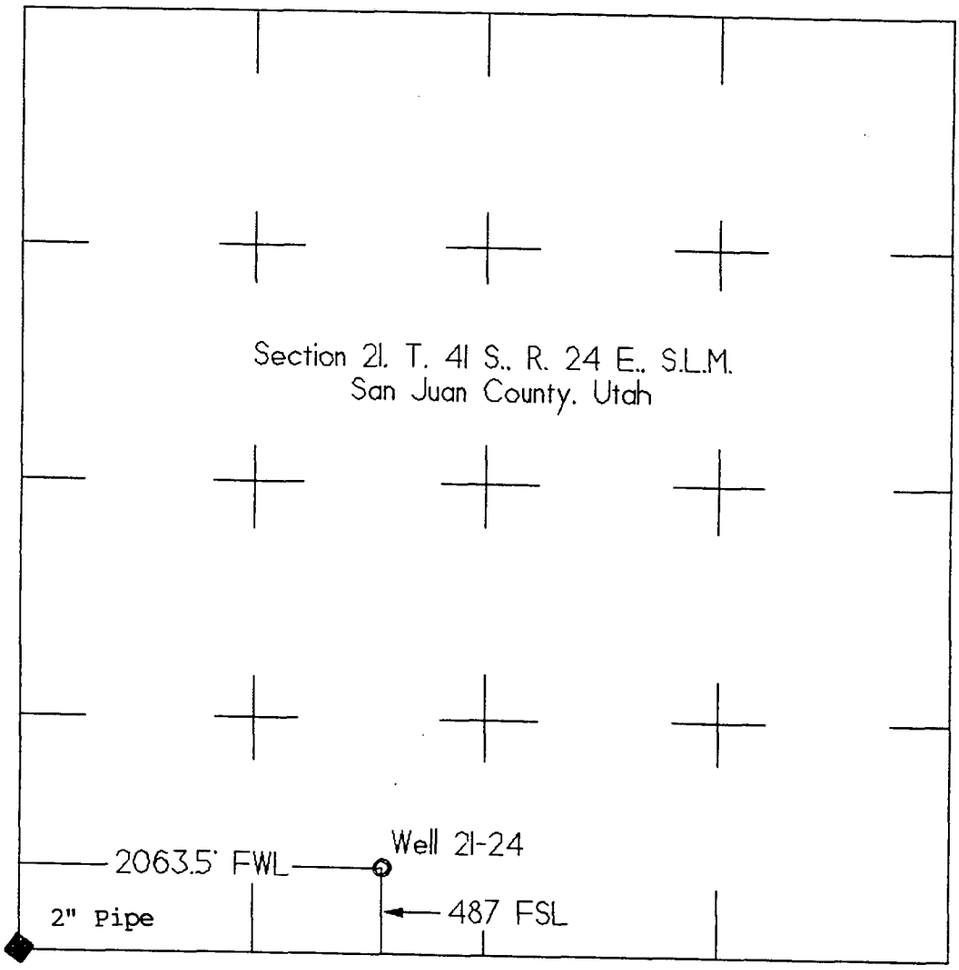
OIL, GAS AND MINING

WELL SPACING

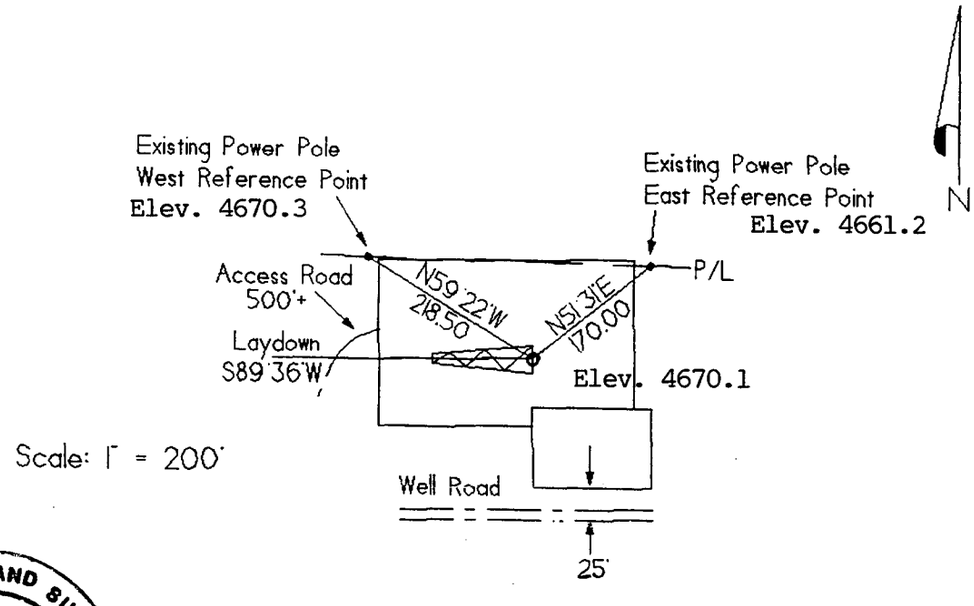
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

MOBIL OIL COMPANY
Well 21-24
Ratherford Unit. SE/4 SW/4 Section 21



Scale: 1" - 1000'



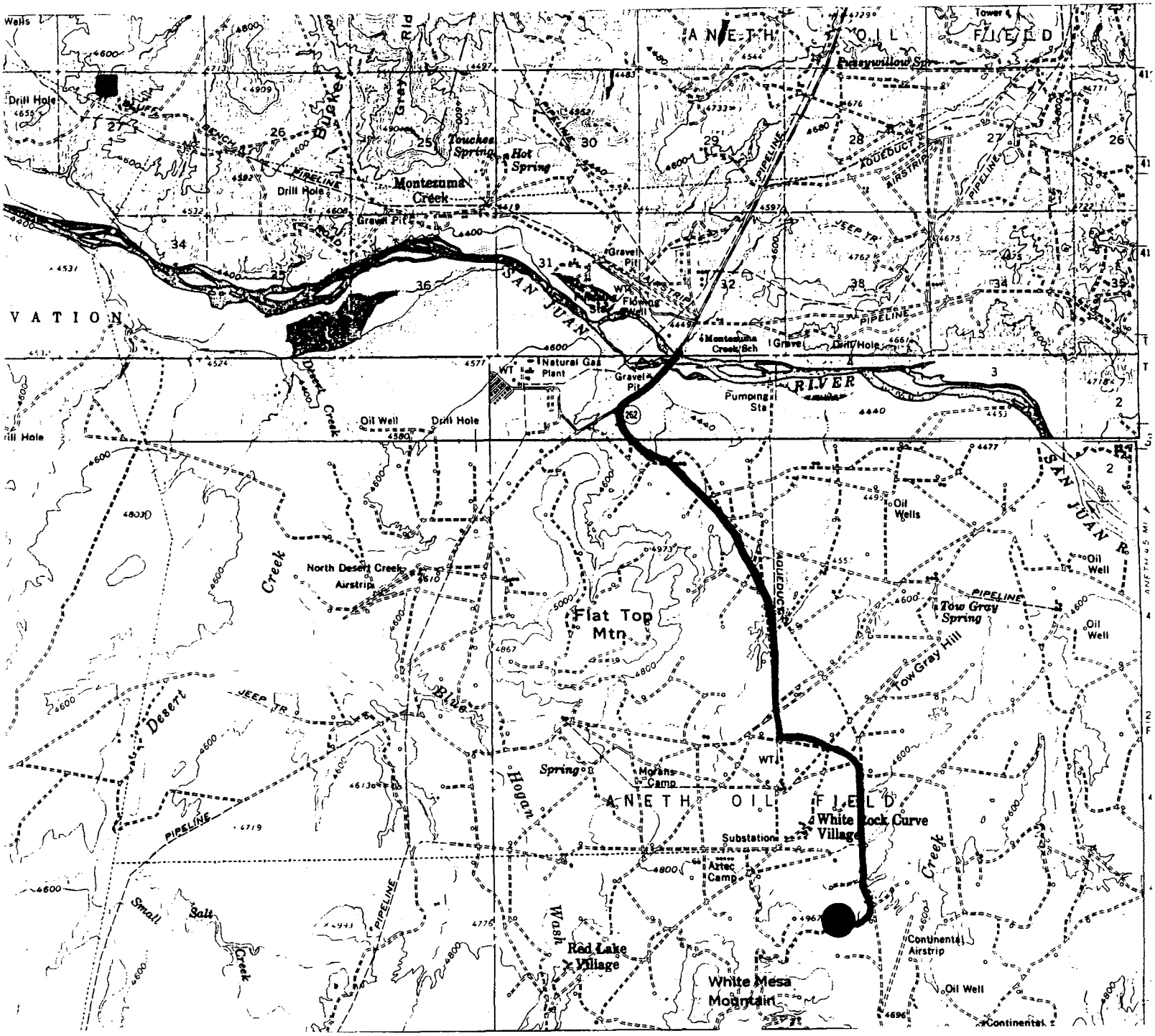
Scale: 1" = 200'

REGISTERED LAND SURVEYOR
No. 5705
GERALD G. HUDDLESTON
STATE OF UTAH

MANESS AND ASSOCIATES, INC.
SURVEYING

PO BOX 1163
215 N. Linden
Cortez, Colorado
565-8845

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah



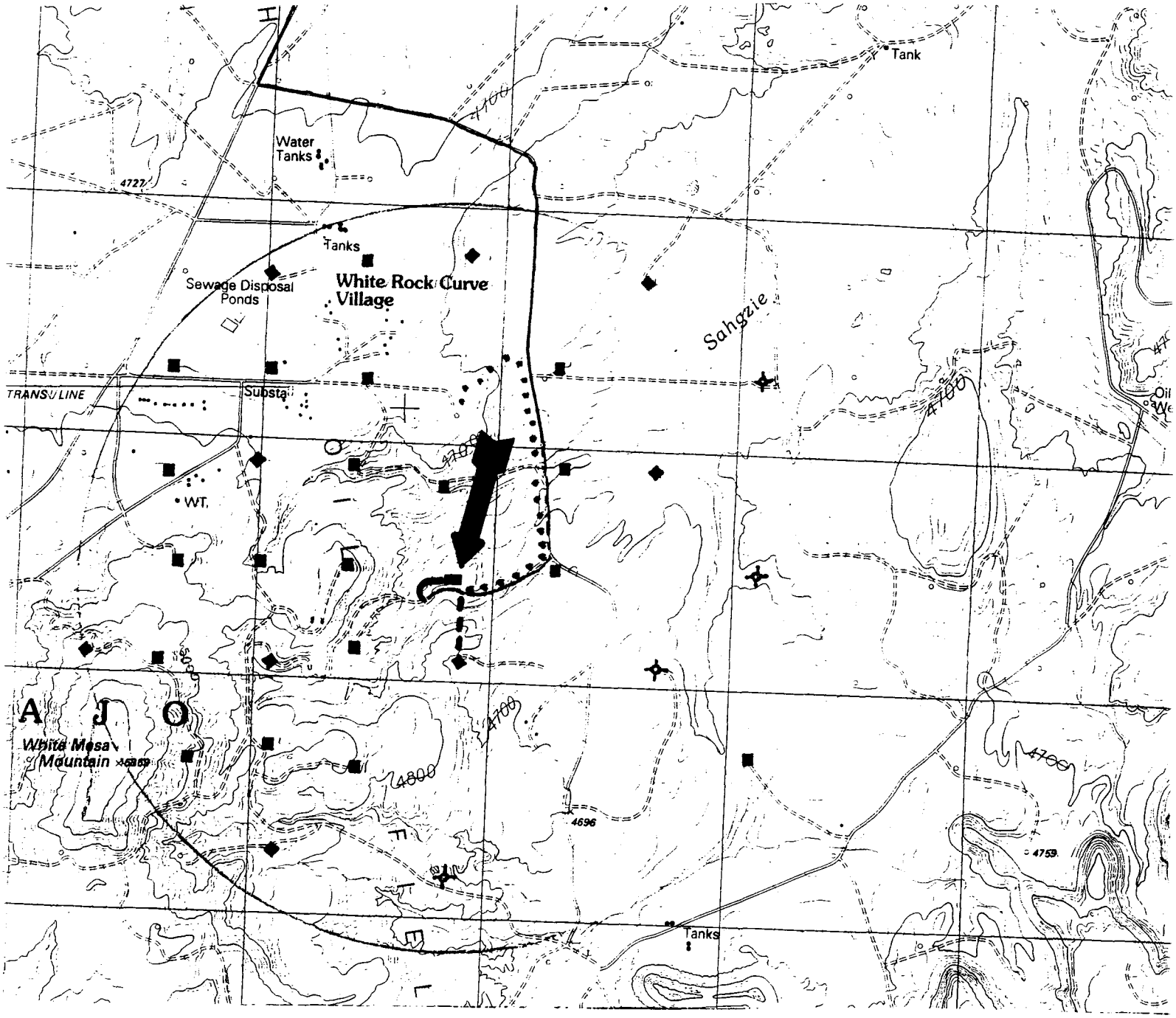
Proposed Well: ●

Access Road: ~

Water Source: ■

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah



Proposed 21-24 Well: ■

Existing Injection Well: ◆

Proposed Injection Line: ▬ ▬ ▬

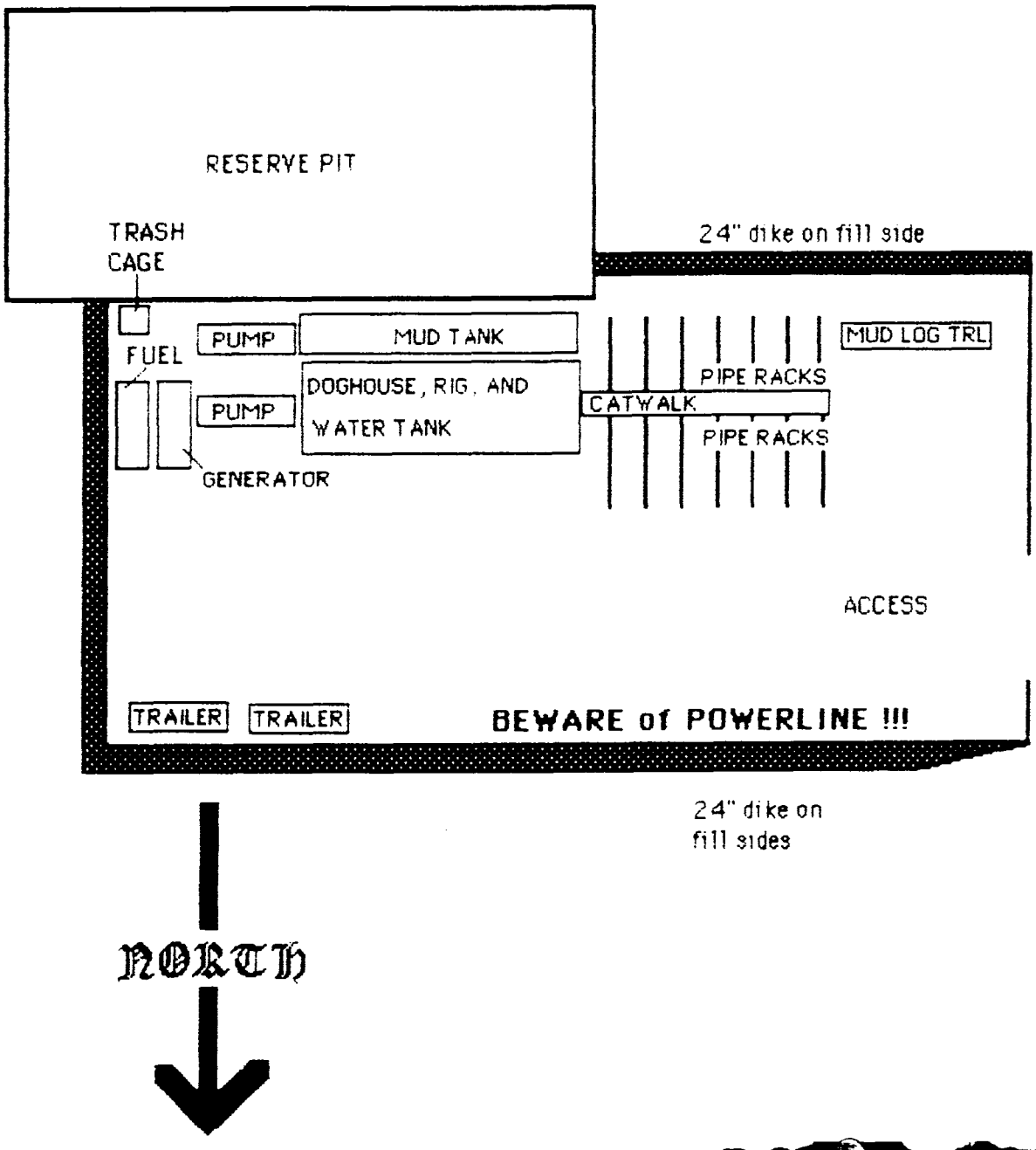
Existing Oil Well: ■

Proposed Flowline: • • • •

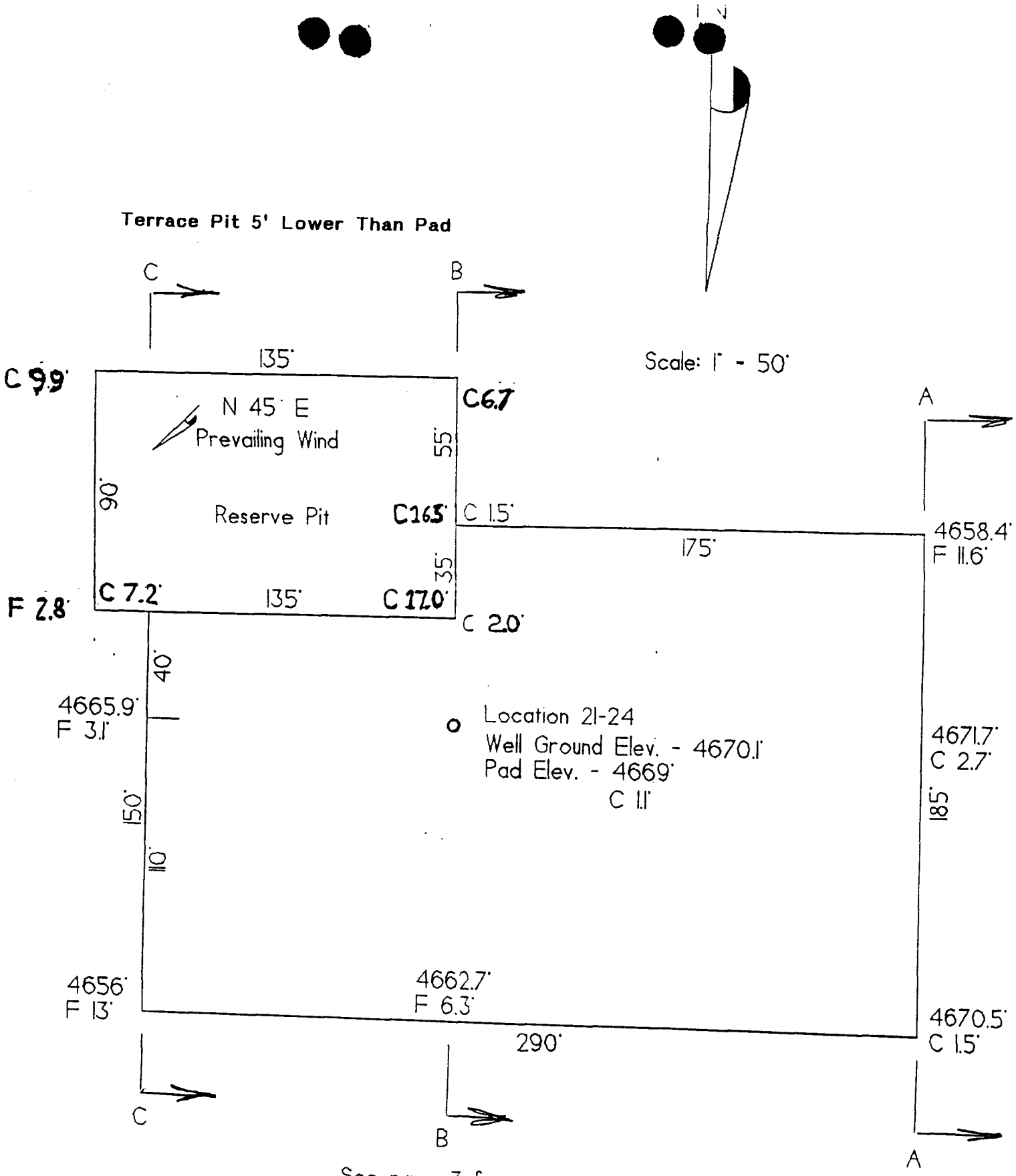
New Access Road: ⌐

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

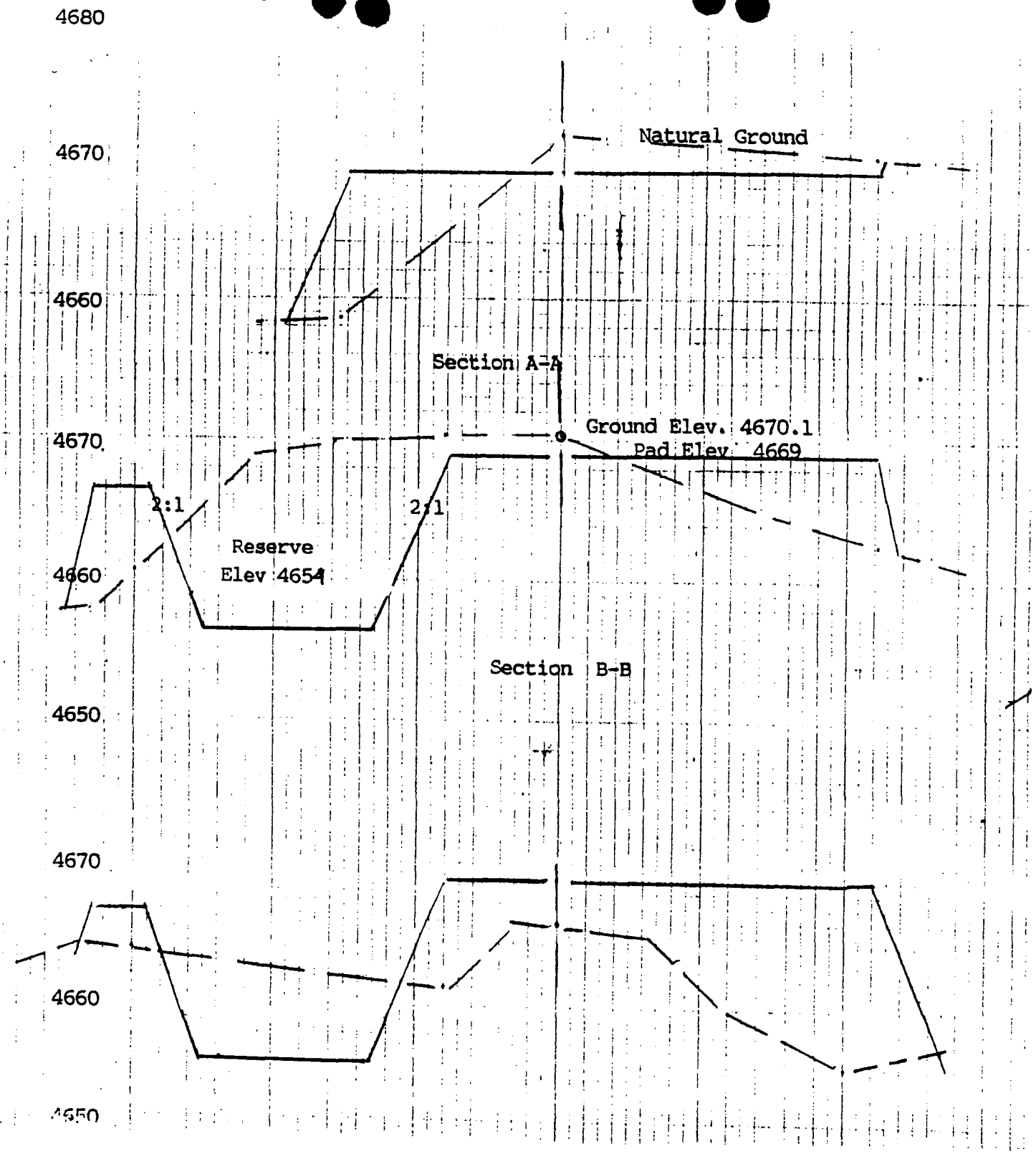
Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah



PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY



See page 3 for cross sections



Horiz. Scale - 1"=50'
Vertical Scale - 1"=10'

Mobil Oil Corporation
Ratherford Unit #21-24
480' FSL and 2040' FWL
Section 21, T-41-S, R-24-E
San Juan County, Utah

Eight Point Drilling Program

1. ESTIMATED FORMATION TOPS*

Formation Name	Depth from GL	Depth from KB	Subsea Depth
Chinle	1300'	1312'	3678'
DeChelly SS	2620'	2632'	2358'
Hermosa LS	4625'	4637'	353'
Ismay LS	5380'	5392'	-402'
L. Ismay LS	5500'	5512'	-522'
Gothic Shale	5515'	5527'	-537'
Desert Creek I	5530'	5542'	-552'
Desert Creek II	5600'	5612'	-622'
Chimney Rock	5700'	5712'	-722'
Total Depth (TD)	5750'	5762'	-772'

* All depths based on ground level of 4978'

2. NOTABLE ZONES

The estimated formation top depths from GL at which water, oil, gas, or other mineral bearing zones may be encountered are:

Possible Water Zone	Possible Coal Zone	Possible Oil or Gas Zones
DeChelly SS 2620'		Desert Creek I 5530' Desert Creek II 5600'

Propose to drill, complete, and equip an oil producer in the Desert Creek formation.

The well will be cased throughout its length and cemented to the surface, if possible.

3. PRESSURE CONTROL (See "5" on Page 3)

The drilling contract has not yet been awarded, thus the exact types of BOP's to be used are not yet known. Examples of a typical BOP and choke manifold are on Page 3. Maximum anticipated surface pressure will be 2,000 psi.

Once out from under the surface casing, a minimum 11" 3,000 psi system will be used with two hydraulic rams (blind/pipe). The choke manifold will have a minimum 3,000 psi rating.

BOP's will be tested to their working pressure after nippling up and after any use under pressure. Pipe rams will be function tested daily. Blind rams will be function tested after each trip out of the hole. BOP tests will be recorded on IADC reports.

Upper and lower kelly valves, floor safety valve, and drill string inside BOP rated at a minimum 3,000 psi will be maintained on the floor at all times. Upper and lower kelly valves with handler available will be in use at all times. Back pressure and full opening drill string safety valves to fit all drill strings in use will be available on the rig floor at all times.

Mobil Oil Corporation
Ratherford Unit #21-24
480' FSL and 2040' FWL
Section 21, T-41-S, R-24-E
San Juan County, Utah

4. CASING & CEMENTING

Hole Size	O.D.	Weight	Grade	Conn.	Age	Setting Depth (GL)
17-1/2"	13-3/8"	48#	H40	ST&C	New	0000' - 0080'
11"	8-5/8"	24#	USS50	ST&C	New	0000' - 1600'
7-7/8"	5-1/2"	15.5#	USS50	LT&C	New	0000' - 5600'

Surface Casing (0' to 80'): Cement to surface with 111 ft^3. Volume calculated with 100% excess. Ready-Mix cement.

Intermediate Casing (0' to 1600'): Cement to surface with 540 ft^3. Volume calculated with 30% excess. Lead with slurry of 65:35:6 "B" Poz + 2% $CaCl_2$. Tail with Class "B" + 2% $CaCl_2$. Total of 12 centralizers and one stop collar. One on the shoe joint and one every third collar to 200' from surface.

Production Casing (0' to 5800'): Cement to surface with 1403 ft^3. Volume calculated with 50% excess. Lead with slurry of 50/50 "G" Poz + 8% Gel + .75% Halad-344. Tail with slurry of Premium Cement + 0.05 gal/sx D-AIR-3 + 2.0 gal/sx Latex 2000 + 0.22 gal/sx 434B + 0.5% CFR-3 (Weight/Yield = 15.6/1.18). Total of 17 centralizers and 3 stop collars. One centralizer on the float shoe then every third collar.

5. MUD PROGRAM

Depth	Type	Weight	Viscosity	Fluid Loss
0000' - 1600'	FW/Spud Mud	8.4 - 8.8	35 - 45	NC
1600' - 5000'	FW/PHPA	9.0 - 11.5	36 - 48	NC
5000' - 5800'	FW/PHPA	10 - 11.5	36 - 48	10 - 15

6. CORING, TESTING, AND LOGGING

No cores are currently planned. Neutron, Dual Induction, and Sonic logs may be run. A few RFT tests may also be run.

7. DOWNHOLE CONDITIONS

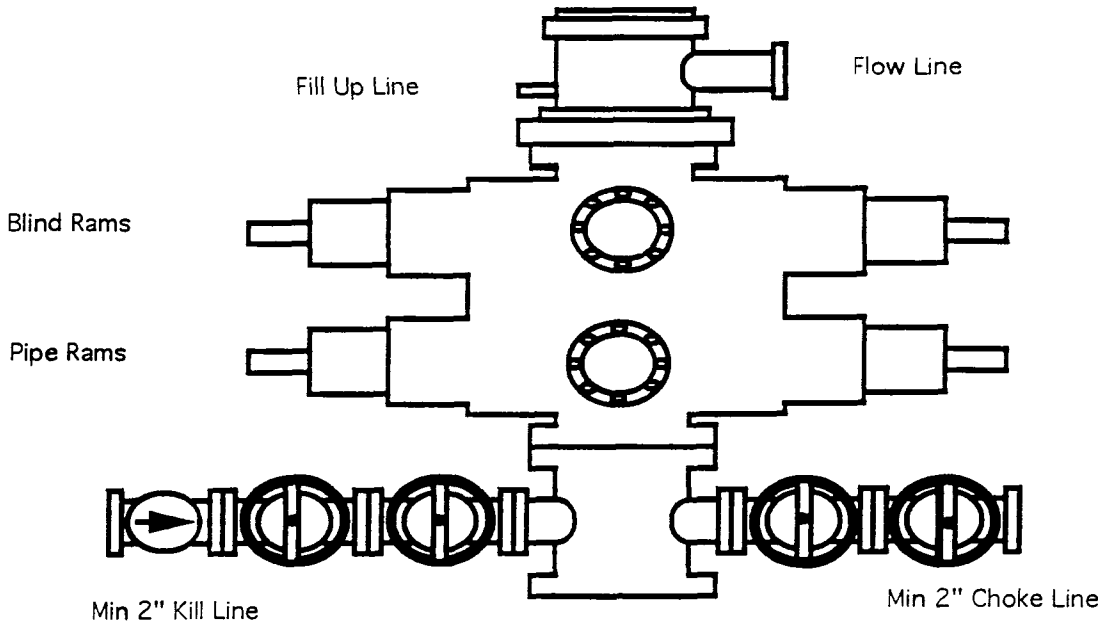
Possible water flows in the DeChelly formation may be encountered.

8. MISCELLANEOUS

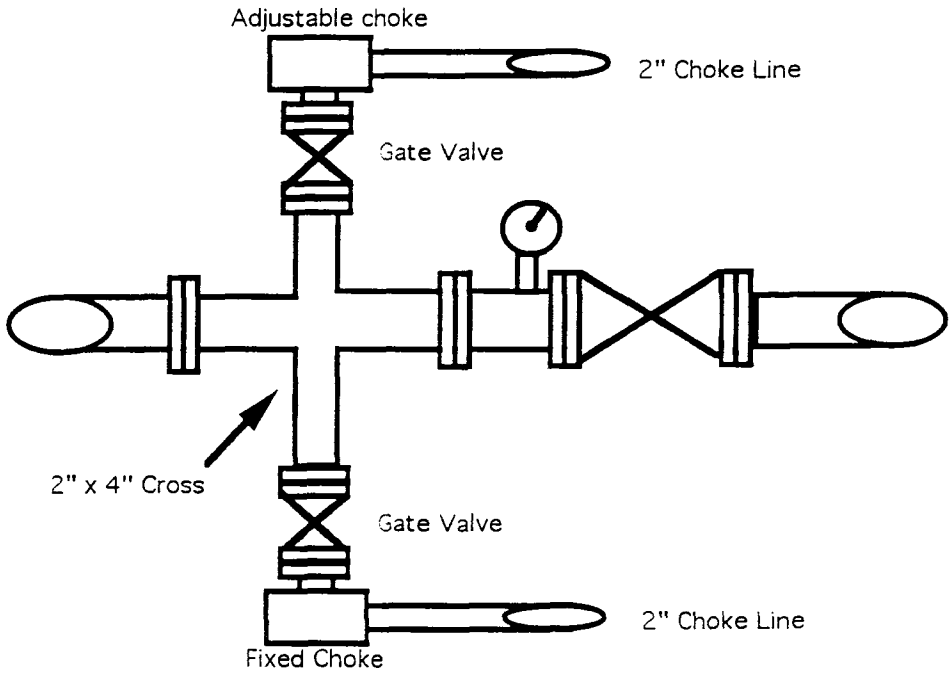
The anticipated spud date is November, 1993. It is expected to take +/- 24 days to drill the well and 10 days to complete the well.

Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
660' FSL and 1980' FWL
San Juan Co., Utah

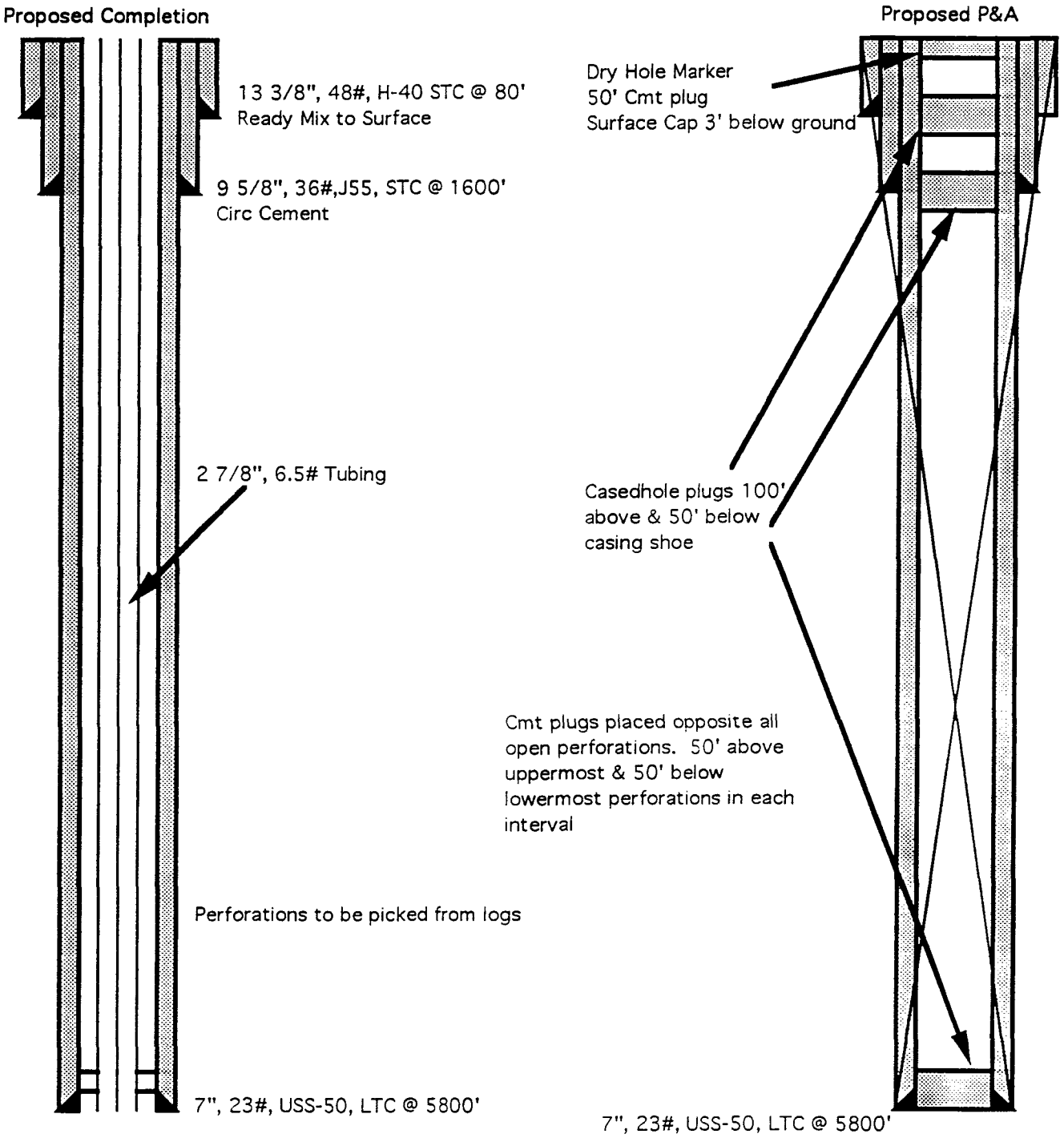
Bop Equipment
11" x 3000 psi Working Pressure



Choke Manifold
3000 psi



Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
660' FSL and 1980' FWL
San Juan Co., Utah



Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

1. DIRECTIONS & EXISTING ROADS

From the Montezuma Creek Post Office, go S 0.6 mi. on BIA Road N-5064.
Then turn left and go SW 2.8 mi. on paved BIA Road N-35.
Then turn left and go SE 1.8 mi. on a dirt field road.
Then turn right and go E 0.4 mi. on a dirt field road to the 21-24 well.

Roads will be maintained to a standard at least equal to their present condition. Existing roads need no upgrading.

2. ROAD TO BE BUILT

About 400' of new road will be built with a ≈16' wide travel surface within a maximum 25' wide disturbed corridor. No cattleguards or culverts are needed. Maximum cut of fill will be 5'. Maximum grade will be 9%.

3. EXISTING WELLS

There are nineteen oil, nine injection, and four P&A wells within a mile radius. All are shown on an attached map. There are no water or gas wells. All wells within a ≈754' radius are within the Ratherford Unit.

4. PROPOSED PRODUCTION FACILITIES

Production will be piped via a ≈5800' long surface (buried at road crossing) flowline north along the west side of roads to Satellite 21. No new tanks are needed. If the well is converted to an injector, then a ≈1000' long buried injection line will be laid south to an existing injection line at the 28-21 well. Surface disturbance will be limited to

that necessary for pipeline construction. All fill material will be removed from all drainages and the drainages returned to their natural form.

The ≈3.5" OD coiled steel tubing flowline will operate at ≈200 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, and will be laid on the surface except at road crossings. The ≤6" OD welded steel or coiled steel tubing injection line will operate at ≈1500 to ≈3500 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, will be internally coated or lined, and will be buried at least 30" deep.

An above ground 3 phase 25kv ≈800' long raptor proof powerline will connect with existing powerlines on the south side of the wellpad.

Above ground structures and equipment (only a pump jack is planned) will be painted with non-glare sand (federal standard 595a-30277) or Mobil beige 12-F-38 color.

5. WATER SUPPLY

Water will be trucked from a BLM (San Juan RA of the Moab District) artesian well in NENW 27-40s-23e. Mobil has permission from the Monticello BLM office.

6. CONSTRUCTION MATERIALS & METHODS

Beware of overhead powerlines along the south isde of the pad. Since no topsoil is present, no soil or brush will be stripped and stored. A 24" high berm will be built along the fill sides of the pad. A minimum 12 mil plastic liner will be installed in the reserve pit. No rock surfacing is planned.

7. WASTE DISPOSAL

The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The 4th side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, contents of the reserve pit will be buried in place. An overhead net will be installed after drilling is finished.

All trash will be placed in a portable trash cage. It will be hauled to an approved landfill. Human waste will be disposed of in 10' deep ratholes under trailers or in chemical toilets. Ratholes will be filled when the trailers are removed.

8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers will be on location for the company man, tool pusher, and mud loggers.

9. WELL SITE LAYOUT

See attached pages for depictions of the well pad, cross sections, cut and fill diagrams, reserve pit, trash cage, access road onto the location, parking, living facilities, soil stockpile, and rig orientation.

10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for a reserve pit to fully evaporate. Rock surfacing material will be removed before starting reclamation. All disturbed areas will be recontoured to a natural shape to blend with the surrounding topography.

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Stockpiled topsoil will be evenly spread. Compacted areas will be plowed or ripped to a depth of 12"-16" before seeding. Seeding will be done between July 1 - August 31 or October 15 - November 30. No seeding will be done when the ground is muddy or frozen. Seed will be drilled 0.5" to 0.75" deep. If broadcast, the rate will be 150% of that shown below and the seed covered with a drag. If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed in the same manner.

SPECIES FOR ROAD & WELLPAD	*lbs/acre PLS*
Indian ricegrass (Oryzopsis hymenoides)	3
Galleta grass (Hilaria jamesii)	2
Needle & thread (Stipa comata)	2
Yellow sweetclover (Melilotus alba)	1
Four wing saltbush (Atriplex canescens)	2

The road will be blocked, water barred, and reclaimed in the same manner as the wellsite. Berms will be built at the top of all slopes. Water bars will be spaced as follows:

% Slope	Spacing
1% - 5%	200 feet
6% - 15%	100 feet
>15%	50 feet

The injection line will be seeded (below) with a slightly different seed mix, but otherwise reclaimed in the same manner as the well and road. Berms will be built at the top of all slopes and road or trail crossings.

SPECIES FOR PIPELINE	*lbs/acre PLS*
Indian ricegrass	3
Giant dropseed	1
Sand dropseed	1

Mammoth wild rye	3
Four wing saltbush	3

11. SURFACE OWNER

The well, new road, powerline, and pipelines are all on Navajo Tribal Trust land in the Red Mesa Chapter. Any changes in the surface use plan must be approved by the BIA Branch of Natural Resources, P.O. Box 966, Shiprock, NM 87420. Call Randy Cornett at (505) 368-4427.

12. OTHER INFORMATION

The nearest hospital is a ≈75 minute drive away in northwest Monticello. It is 3 blocks northwest of the intersection of US 666 and US 191. Hospital phone number is (801) 587-2116. Or dial 1-800-332-1911 from anywhere in San Juan County, Ut. The closest medically equipped helicopter is in Farmington NM. Farmington hospital phone number is (505) 325-5011.

13. REPRESENTATION

Anyone having questions concerning the APD should contact:

Shirley Todd, Technician
Mobil Exploration & Producing U. S. Inc.
P.O. Box 633
Midland, Tx. 79702
(915) 688-2585

Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop
Santa Fe, NM 87505
(505) 984-8120

The field representative will be:

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Ed Barber, Production Foreman
Mobil Exploration & Producing U. S. Inc.
P.O. Drawer G
Cortez, Co. 81321
(303) 565-9049

Mobil Exploration & Producing U. S. Inc. has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Mobil Exploration & Producing U. S. Inc.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Mobil Exploration & Producing U. S. Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

for Diane Klancher
Environmental Regulatory/LP Supervisor
Environmental & Regulatory Dept.
Mobil Exploration & Producing U. S. Inc.

9-23-93
Date

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/27/93

API NO. ASSIGNED: 43-037-31720

WELL NAME: RATHERFORD UNIT 21-24
OPERATOR: MOBIL EXPL. & PROD. (N7370)

PROPOSED LOCATION:
SESW 21 - T41S - R24E
SURFACE: 2063-FWL-0487-FSL
BOTTOM: 2063-FWL-0487-FSL
SAN JUAN COUNTY
GREATER ANETH (R.U.) FIELD (365)

LEASE TYPE: IND
LEASE NUMBER: 14-20-603-355

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

Y Plat
Y Bond FEDERAL
(Number _____)
N Potash (Y/N)
N Oil shale (Y/N)
Y Water permit
(Number FROM BLM)
N RDCC Review (Y/N)
(Date: _____)

LOCATION AND SITING:

Y R649-2-3. Unit: SW-I-4192

___ R649-3-2. General.

___ R649-3-3. Exception.

~~Y~~ Drilling Unit.
Board Cause no: ~~152-4~~
Date: ~~5/20/89 (40 ACRES)~~

COMMENTS: WATER WILL BE PURCHASED FROM A BLM WELL SEC. 27-40S-23E, NO CURRENT POD ON FILE POD 10/26/93

STIPULATIONS: _____

(915) 699-2599

Form 3160-3
November 1983)
(formerly 9-331C)

AMENDED

SUBMIT IN [illegible]PLICAT[illegible]
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL ECPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

9. WELL NO.: 21-24

3. ADDRESS OF OPERATOR: P O BOX 633 MIDLAND TX 79702

10. FIELD AND POOL, OR WILDCAT:

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2063.5' FWL 487' FSL
At proposed prod. zone: SAME

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.21 T41S R24E SWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 5 MILES SE OF MONTEZUMA CREEK, UTAH

12. COUNTY OR PARISH: SAN JUAN | 13. STATE: UT

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 487' SE FROM THE RATHERFORD UNIT LEASE LINE

16. NO. OF ACRES IN LEASE: 2161

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40 ACRES

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320' EAST OF 21-14

19. PROPOSED DEPTH: 6000

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GL - 4978

22. APPROX. DATE WORK WILL START*: NOV. 15, 1993

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48#	80'	111 ft^3 (Circ to Surf)
11	8 5/8	24#	1600'	540 ft^3 (Circ to Surf)
7 7/8	5 1/2	15.5#	6000	1403 ft^3 (Circ to Surf)

SEE ATTACHED 8 POINT WELL CONTROL PLAN FOR ADDITIONAL DRILLING INFORMATION

This production area has H_2S: therefore, monitoring and safety equipment are required. Safety equipment will be rigged up by 3000'. Federal Requirements for equipment on this well are as follows:

1) Flare line and means of ignition
2) Remote controlled choke
3) Escape breathing apparatus for all crew members
4) H_2S sensors and associated audible/visual alarm(s)
5) At least one (1) portable H_2S monitor
6) Wind direction indicators
7) Caution/danger sign(s) and flag(s)
8) Mud-gas separator
9) Communication from wellsite

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 10-8-93

(This space for Federal or State office use)

PERMIT NO. [illegible] APPROVAL DATE

APPROVED BY TITLE DATE 11/8/93

CONDITIONS OF APPROVAL, IF ANY:

649-2-3

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
MOBIL OIL CORPORATION

3. Address and Telephone No.
P O BOX 633 MIDLAND, TX 79702 (915) 688-2585

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
487' FNL, 2063.5' FWL SEC.21, T41S, R24E SWSW

5. Lease Designation and Serial No.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

8. Well Name and No.
21-24

9. API Well No.
NA

10. Field and Pool, or Exploratory Area
GREATER ANETH

11. County or Parish, State
SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*
AMEND SURFACE USAGE PLAN FOR APD.
5.WATER SUPPLY - WATER WILL BE TRUCKED FROM PRIVATE LAND.

RECEIVED
OCT 18 1993
DIVISION OF
OIL, GAS & MINING

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 10-19-93
BY: [signature]

14. I hereby certify that the foregoing is true and correct
Signed Shirley Todd SHIRLEY TODD Title ENV. & REG. TECHNICIAN Date 10-12-93

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

RADIUS OF EXPOSURE

10ppm Radius of Exposure calculated at 83'.

Maximum releasable H_2S calculated at 0.9 lbs/day, based on maximum measured H_2S concentration in a producing well gas stream (100ppm), and 100 MCFD maximum theoretical gas release volume. Maximum theoretical daily gas volume based on lease GOR of 500, and optimistic well test of 200 BOPD.

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5' FWL 487' FSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

Eight Point Drilling Program

1. ESTIMATED FORMATION TOPS*

Formation	Depth from GL	Drill Depth	Subsea Depth
Chinle	992.1	1004.1	3387.9
DeChelly SS	2312.1	2324.1	2037.9
Hermosa LS	4317.1	4329.1	112.9
Ismay LS	5072.1	5084.1	-712.1
L. Ismay Ls	5192.1	5204.1	-847.1
Gothic Shale	5207.1	5219.1	-857.1
Desert Creek I	5222.1	5234.1	-872.1
Desert Creek II	5292.1	5304.1	-932.1
Chimney Rock	5392.1	5404.1	-1042.1
TD	6000	6012	-1317.9

* All depths based on ground level of 4978'

2. NOTABLE ZONES

The estimated formation top depths from GL at which water, oil, gas, or other mineral bearing zones may be encountered are:

Possible Water Zone	Possible Coal Zone	Possible Oil or Gas Zones
DeChelly SS 2620'		Desert Creek I 5530' Desert Creek II 5600'

Propose to drill, complete, and equip an oil producer in the Desert Creek formation.

The well will be cased throughout its length and cemented to the surface, if possible.

3. PRESSURE CONTROL (See "5" on Page 3)

The drilling contract has not yet been awarded, thus the exact types of BOP's to be used are not yet known. Examples of a typical BOP and choke manifold are on Page 3. Maximum anticipated surface pressure will be 2,000 psi.

Once out from under the surface casing, a minimum 11" 3.000 psi system will be used with two hydraulic rams (blind/pipe). The choke manifold will have a minimum 3.000 psi rating.

BOP's will be tested to their working pressure after nippling up and after any use under pressure. Pipe rams will be function tested daily. Blind rams will be function tested after each trip out of the hole. BOP tests will be recorded on IADC reports.

Upper and lower kelly valves, floor safety valve, and drill string inside BOP rated at a minimum 3,000 psi will be maintained on the floor at all times. Upper and lower kelly valves with handler available will be in use at all times. Back pressure and full opening drill string safety valves to fit all drill strings in use will be available on the rig floor at all times.

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5 FWL 487' fSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

4. CASING & CEMENTING

Hole Size	O.D.	Weight	Grade	Conn.	Age	Setting Depth (GL)
17-1/2"	13-3/8"	48#	H40	ST&C	New	0000' - 0080'
11"	8-5/8"	24#	USS50	ST&C	New	0000' - 1600'
7-7/8"	5-1/2"	15.5#	USS50	LT&C	New	0000' - 6000

Surface Casing (0' to 80'): Cement to surface with 111 ft^3. Volume calculated with 100% excess. Ready-Mix cement.

Intermediate Casing (0' to 1600'): Cement to surface with 540 ft^3. Volume calculated with 30% excess. Lead with slurry of 65:35:6 "B" Poz + 2% $CaCl_2$. Tail with Class "B" + 2% $CaCl_2$. Total of 12 centralizers and one stop collar. One on the shoe joint and one every third collar to 200' from surface.

Production Casing (0' to 6000): Cement to surface with 1403 ft^3. Volume calculated with 50% excess. Lead with slurry of 50/50 "G" Poz + 8% Gel + .75% Halad-344. Tail with slurry of Premium Cement + 0.05 gal/sx D-AIR-3 + 2.0 gal/sx Latex 2000 + 0.22 gal/sx 434B + 0.5% CFR-3 (Weight/Yield = 15.6/1.18). Total of 17 centralizers and 3 stop collars. One centralizer on the float shoe then every third collar.

5. MUD PROGRAM

Depth	Type	Weight	Viscosity	Fluid Loss
0000' - 1600'	FW/Spud Mud	8.4 - 8.8	35 - 45	NC
1600' - 5000'	FW/PHPA	9.0 - 11.5	36 - 48	NC
5000' - 6000'	FW/PHPA	10 - 11.5	36 - 48	10 - 15

6. CORING, TESTING, AND LOGGING

No cores are currently planned. Neutron, Dual Induction, and Sonic logs may be run. A few RFT tests may also be run.

7. DOWNHOLE CONDITIONS

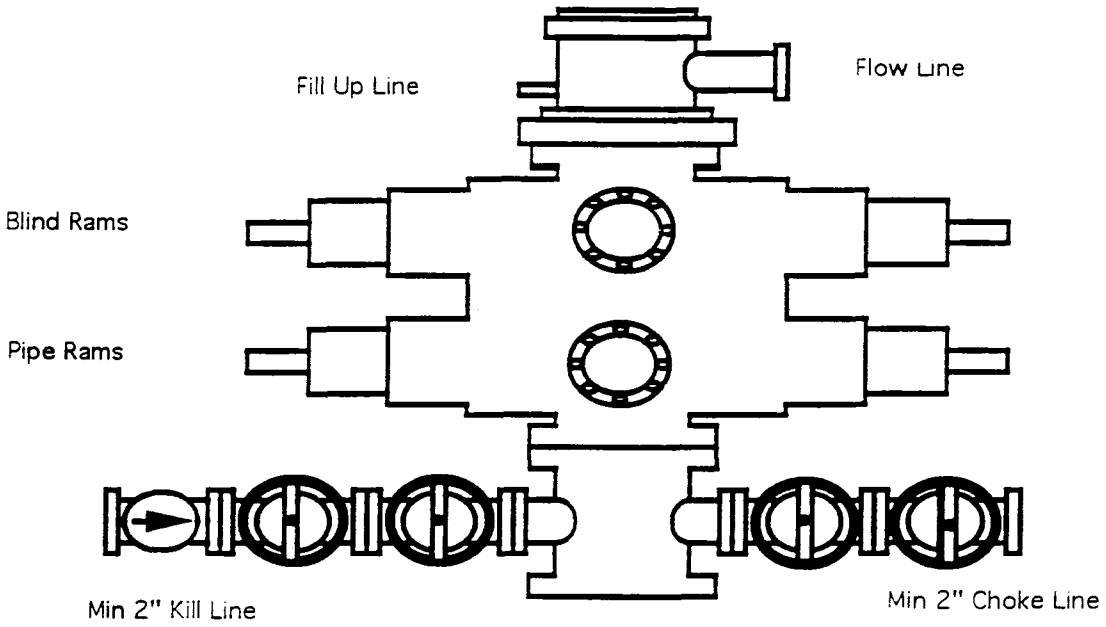
Possible water flows in the DeChelly formation may be encountered.

8. MISCELLANEOUS

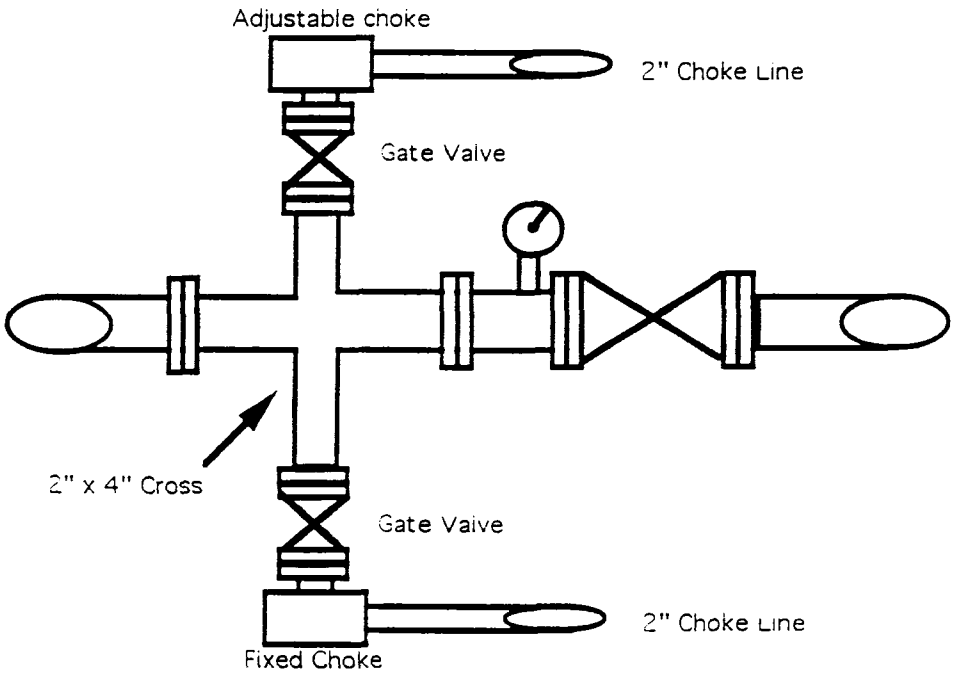
The anticipated spud date is November, 1993. It is expected to take +/- 24 days to drill the well and 10 days to complete the well.

Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
2063.5 FWL 487' FSL
San Juan Co., Utah

Bop Equipment
11" x 3000 psi Working Pressure



Choke Manifold
3000 psi



Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
2063.5 FWL 487' FSL
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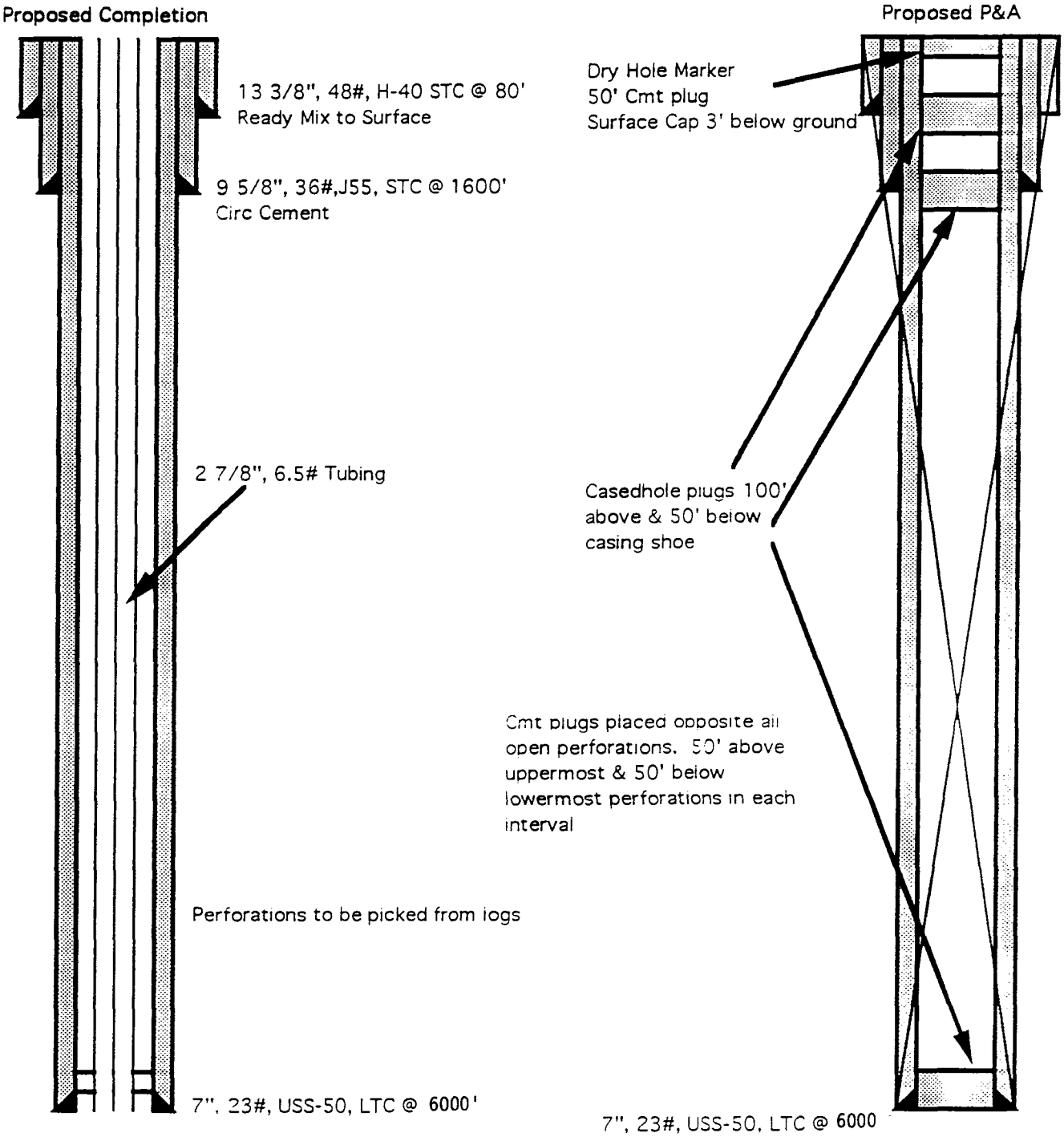
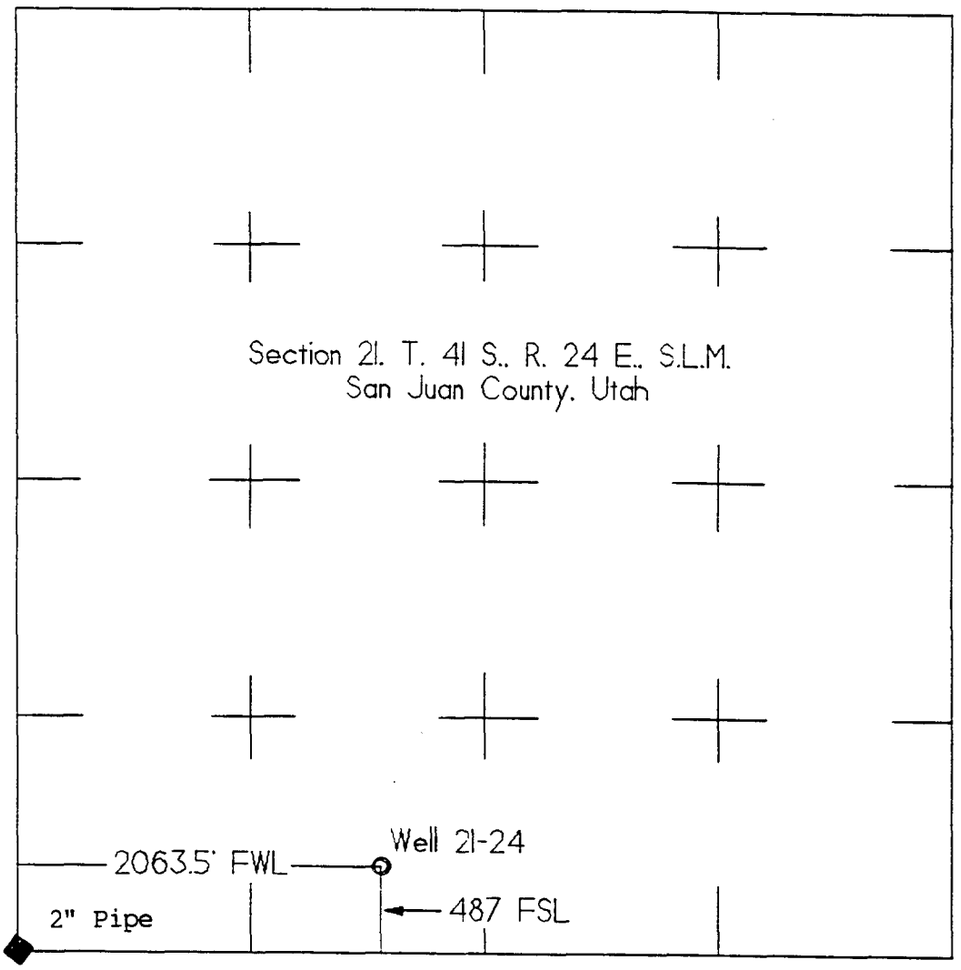
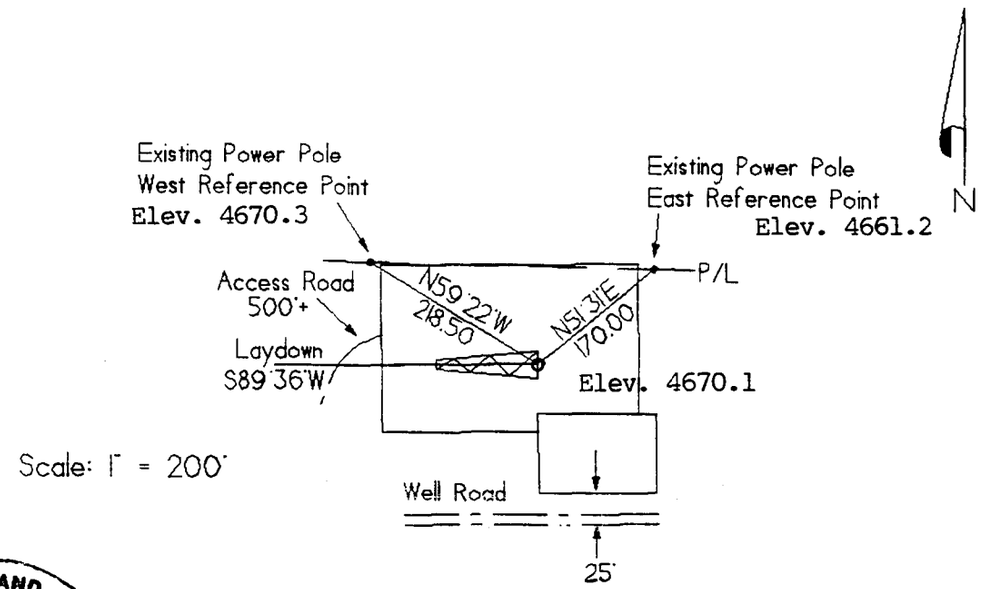


MOBIL OIL COMPANY
Well 21-24
Ratherford Unit. SE/4 SW/4 Section 21



Scale: 1" - 1000'



Scale: 1" = 200'

REGISTERED LAND SURVEYOR
No. 5705
GERALD G. HUDDLESTON
STATE OF UTAH

MANESS AND ASSOCIATES, INC.
SURVEYING

PO BOX 1163
215 N. Linden
Cortez, Colorado
565-8845

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

1. DIRECTIONS & EXISTING ROADS

From the Montezuma Creek Post Office, go S 0.6 mi. on BIA Road N-5064.
Then turn left and go SW 2.8 mi. on paved BIA Road N-35.
Then turn left and go SE 1.8 mi. on a dirt field road.
Then turn right and go E 0.4 mi. on a dirt field road to the 21-24 well.

Roads will be maintained to a standard at least equal to their present condition. Existing roads need no upgrading.

2. ROAD TO BE BUILT

About 400' of new road will be built with a ≈16' wide travel surface within a maximum 25' wide disturbed corridor. No cattleguards or culverts are needed. Maximum cut of fill will be 5'. Maximum grade will be 9%.

3. EXISTING WELLS

There are nineteen oil, nine injection, and four P&A wells within a mile radius. All are shown on an attached map. There are no water or gas wells. All wells within a ≈754' radius are within the Ratherford Unit.

4. PROPOSED PRODUCTION FACILITIES

Production will be piped via a ≈5800' long surface (buried at road crossing) flowline north along the west side of roads to Satellite 21. No new tanks are needed. If the well is converted to an injector, then a ≈1000' long buried injection line will be laid south to an existing injection line at the 28-21 well. Surface disturbance will be limited to

that necessary for pipeline construction. All fill material will be removed from all drainages and the drainages returned to their natural form.

The ≈3.5" OD coiled steel tubing flowline will operate at ≈200 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, and will be laid on the surface except at road crossings. The ≤6" OD welded steel or coiled steel tubing injection line will operate at ≈1500 to ≈3500 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, will be internally coated or lined, and will be buried at least 30" deep.

An above ground 3 phase 25kv ≈800' long raptor proof powerline will connect with existing powerlines on the south side of the wellpad.

Above ground structures and equipment (only a pump jack is planned) will be painted with non-glare sand (federal standard 595a-30277) or Mobil beige 12-F-38 color.

5. WATER SUPPLY

Water will be trucked from a BLM (San Juan RA of the Moab District) artesian well in NENW 27-40s-23e. Mobil has permission from the Monticello BLM office.

6. CONSTRUCTION MATERIALS & METHODS

Beware of overhead powerlines along the south isde of the pad. Since no topsoil is present, no soil or brush will be stripped and stored. A 24" high berm will be built along the fill sides of the pad. A minimum 12 mil plastic liner will be installed in the reserve pit. No rock surfacing is planned.

7. WASTE DISPOSAL

The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The 4th side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, contents of the reserve pit will be buried in place. An overhead net will be installed after drilling is finished.

All trash will be placed in a portable trash cage. It will be hauled to an approved landfill. Human waste will be disposed of in 10' deep ratholes under trailers or in chemical toilets. Ratholes will be filled when the trailers are removed.

8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers will be on location for the company man, tool pusher, and mud loggers.

9. WELL SITE LAYOUT

See attached pages for depictions of the well pad, cross sections, cut and fill diagrams, reserve pit, trash cage, access road onto the location, parking, living facilities, soil stockpile, and rig orientation.

10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for a reserve pit to fully evaporate. Rock surfacing material will be removed before starting reclamation. All disturbed areas will be recontoured to a natural shape to blend with the surrounding topography.

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Stockpiled topsoil will be evenly spread. Compacted areas will be plowed or ripped to a depth of 12"-16" before seeding. Seeding will be done between July 1 - August 31 or October 15 - November 30. No seeding will be done when the ground is muddy or frozen. Seed will be drilled 0.5" to 0.75" deep. If broadcast, the rate will be 150% of that shown below and the seed covered with a drag. If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed in the same manner.

SPECIES FOR ROAD & WELLPAD	*lbs/acre PLS*
Indian ricegrass (Oryzopsis hymenoides)	3
Galleta grass (Hilaria jamesii)	2
Needle & thread (Stipa comata)	2
Yellow sweetclover (Melilotus alba)	1
Four wing saltbush (Atriplex canescens)	2

The road will be blocked, water barred, and reclaimed in the same manner as the wellsite. Berms will be built at the top of all slopes. Water bars will be spaced as follows:

% Slope	Spacing
1% - 5%	200 feet
6% - 15%	100 feet
>15%	50 feet

The injection line will be seeded (below) with a slightly different seed mix, but otherwise reclaimed in the same manner as the well and road. Berms will be built at the top of all slopes and road or trail crossings.

SPECIES FOR PIPELINE	*lbs/acre PLS*
Indian ricegrass	3
Giant dropseed	1
Sand dropseed	1

Mammoth wild rye	3
Four wing saltbush	3

11. SURFACE OWNER

The well, new road, powerline. and pipelines are all on Navajo Tribal Trust land in the Red Mesa Chapter. Any changes in the surface use plan must be approved by the BIA Branch of Natural Resources, P.O. Box 966, Shiprock, NM 87420. Call Randy Cornett at (505) 368-4427.

12. OTHER INFORMATION

The nearest hospital is a ≈75 minute drive away in northwest Monticello. It is 3 blocks northwest of the intersection of US 666 and US 191. Hospital phone number is (801) 587-2116. Or dial 1-800-332-1911 from anywhere in San Juan County, Ut. The closest medically equipped helicopter is in Farmington NM. Farmington hospital phone number is (505) 325-5011.

13. REPRESENTATION

Anyone having questions concerning the APD should contact:

Shirley Todd, Technician
Mobil Exploration & Producing U. S. Inc.
P.O. Box 633
Midland, Tx. 79702
(915) 688-2585

Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop
Santa Fe, NM 87505
(505) 984-8120

The field representative will be:

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Ed Barber, Production Foreman
Mobil Exploration & Producing U. S. Inc.
P.O. Drawer G
Cortez, Co. 81321
(303) 565-9049

Mobil Exploration & Producing U. S. Inc. has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Mobil Exploration & Producing U. S. Inc.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Mobil Exploration & Producing U. S. Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

for Diane Klancher
Environmental Regulatory/LP Supervisor
Environmental & Regulatory Dept.
Mobil Exploration & Producing U. S. Inc.

9-23-93
Date

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

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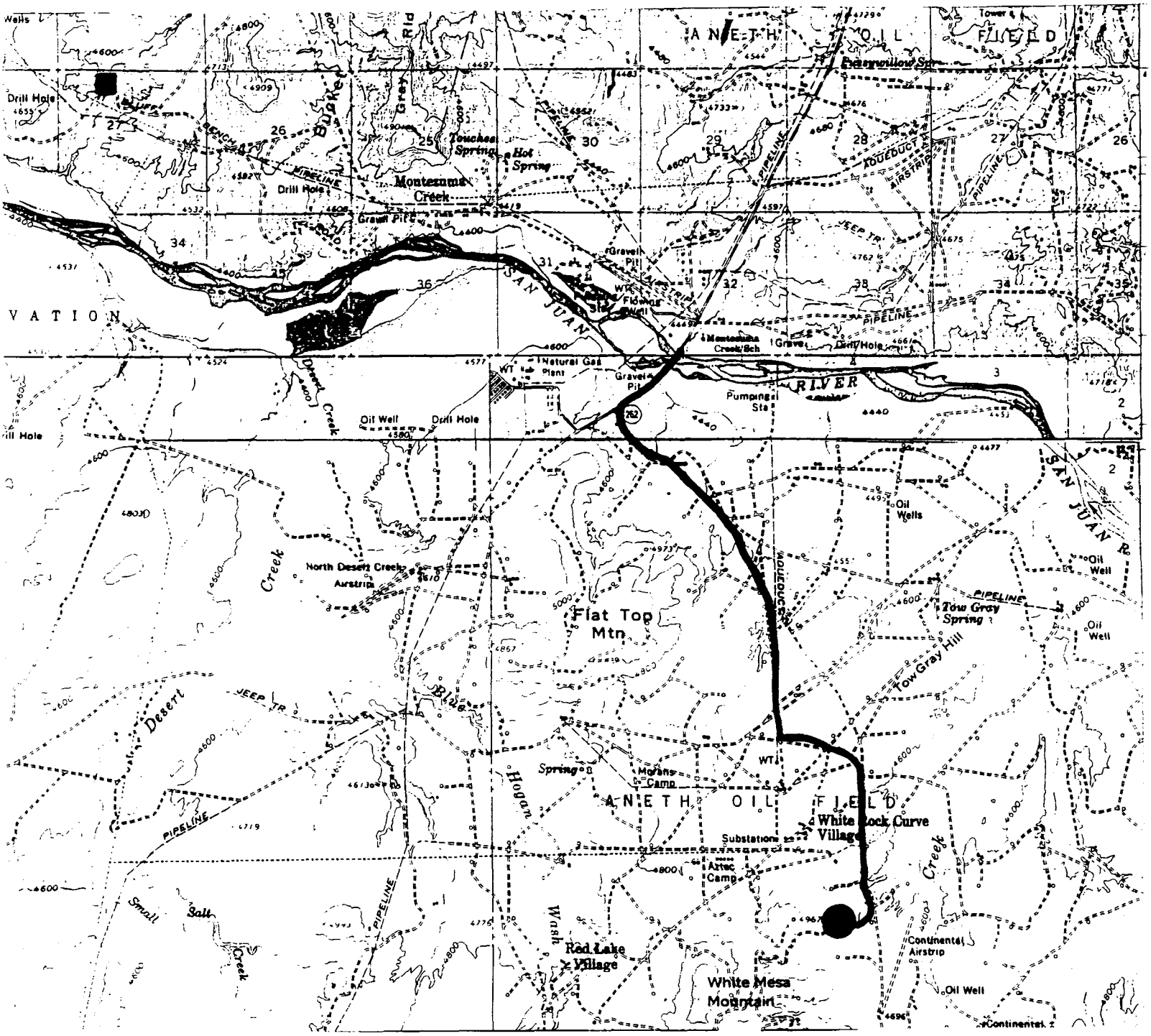
OCT 1 2 1993

DIVISION OF
OIL, GAS & MINING

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah



Proposed Well: ●

Access Road: ~

Water Source: ■

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

Mobil Exploration & Producing U.S. Inc.
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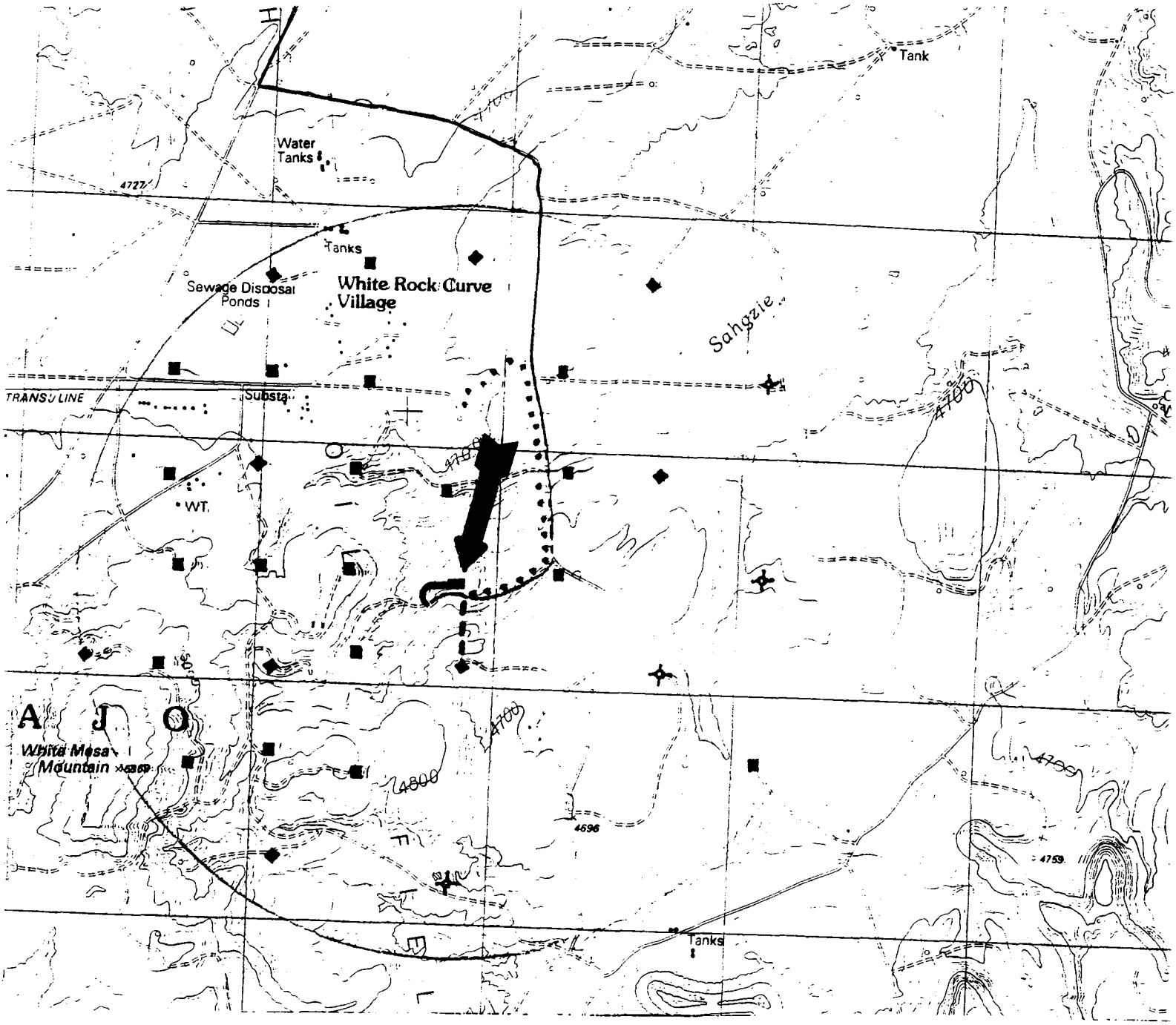
OCT 12 1993
DIVISION OF
OIL, GAS & MINING



Proposed 21-24 Well: ■

Proposed Injection Line: ▬ ▬ ▬

Proposed Flowline: • • • •

New Access Road: ⌐

Existing Injection Well: ◆

Existing Oil Well: ■

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

Mobil Exploration & Producing U.S. Inc.
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487' FSL & 2063.5' FWL
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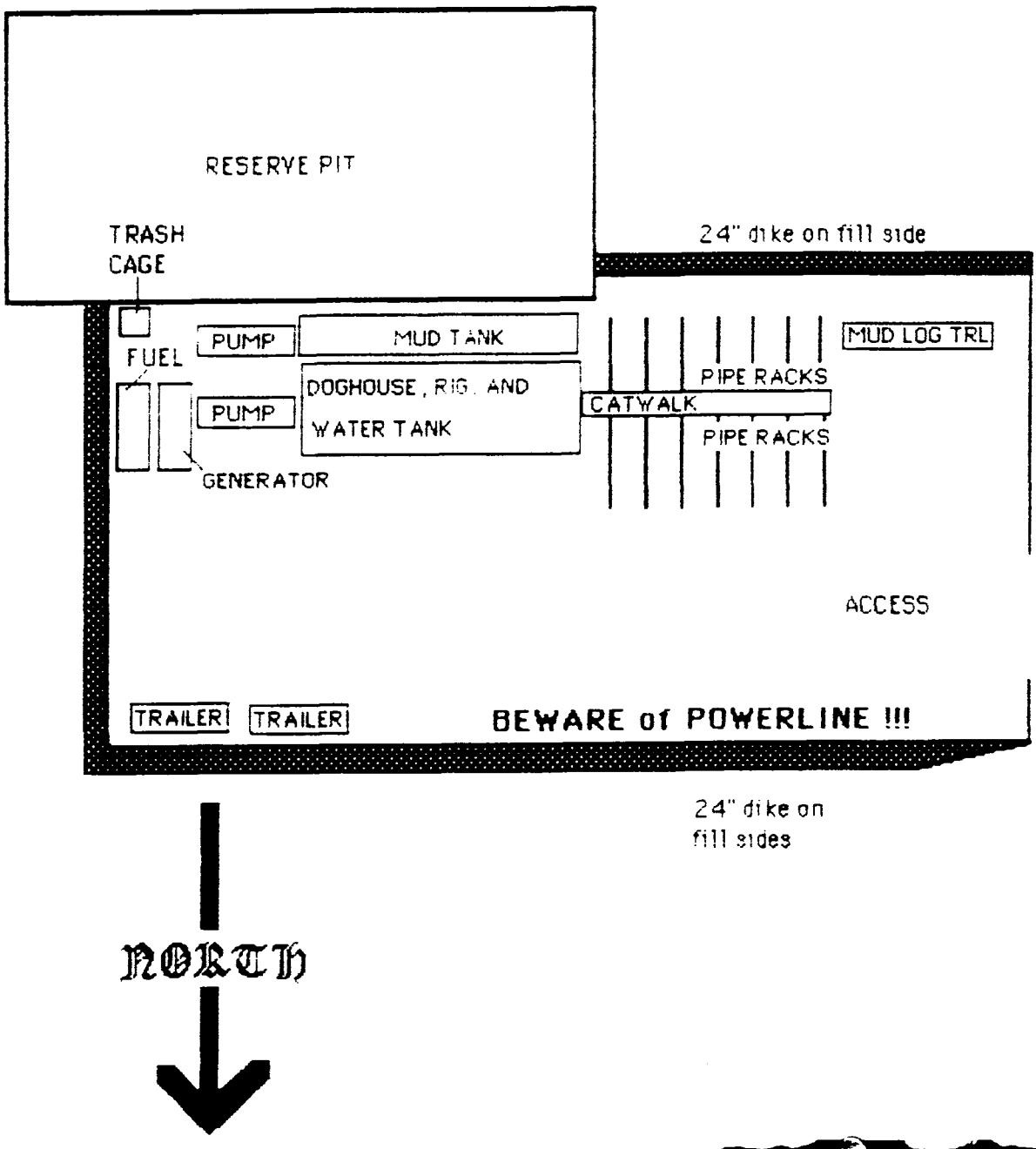

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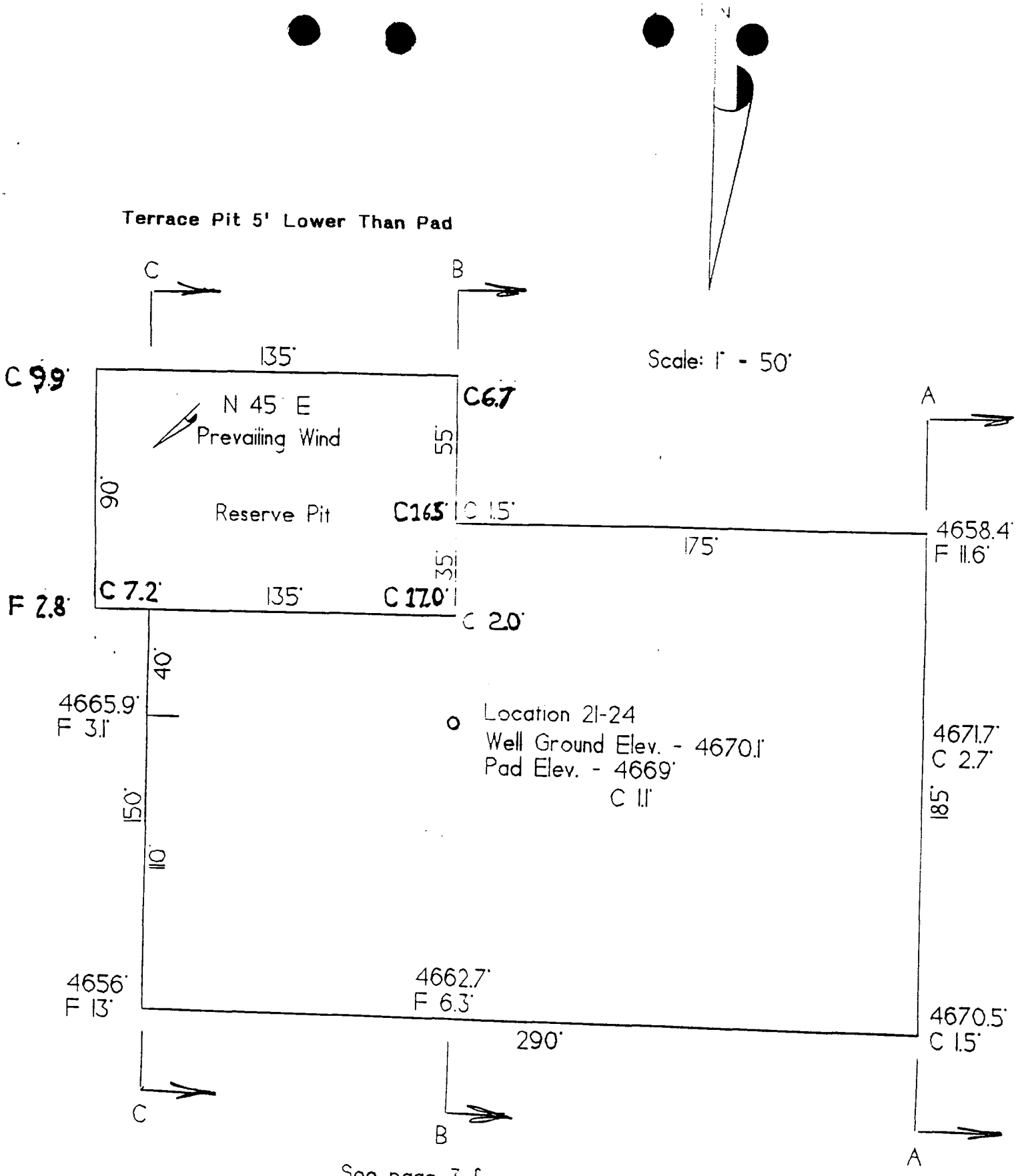
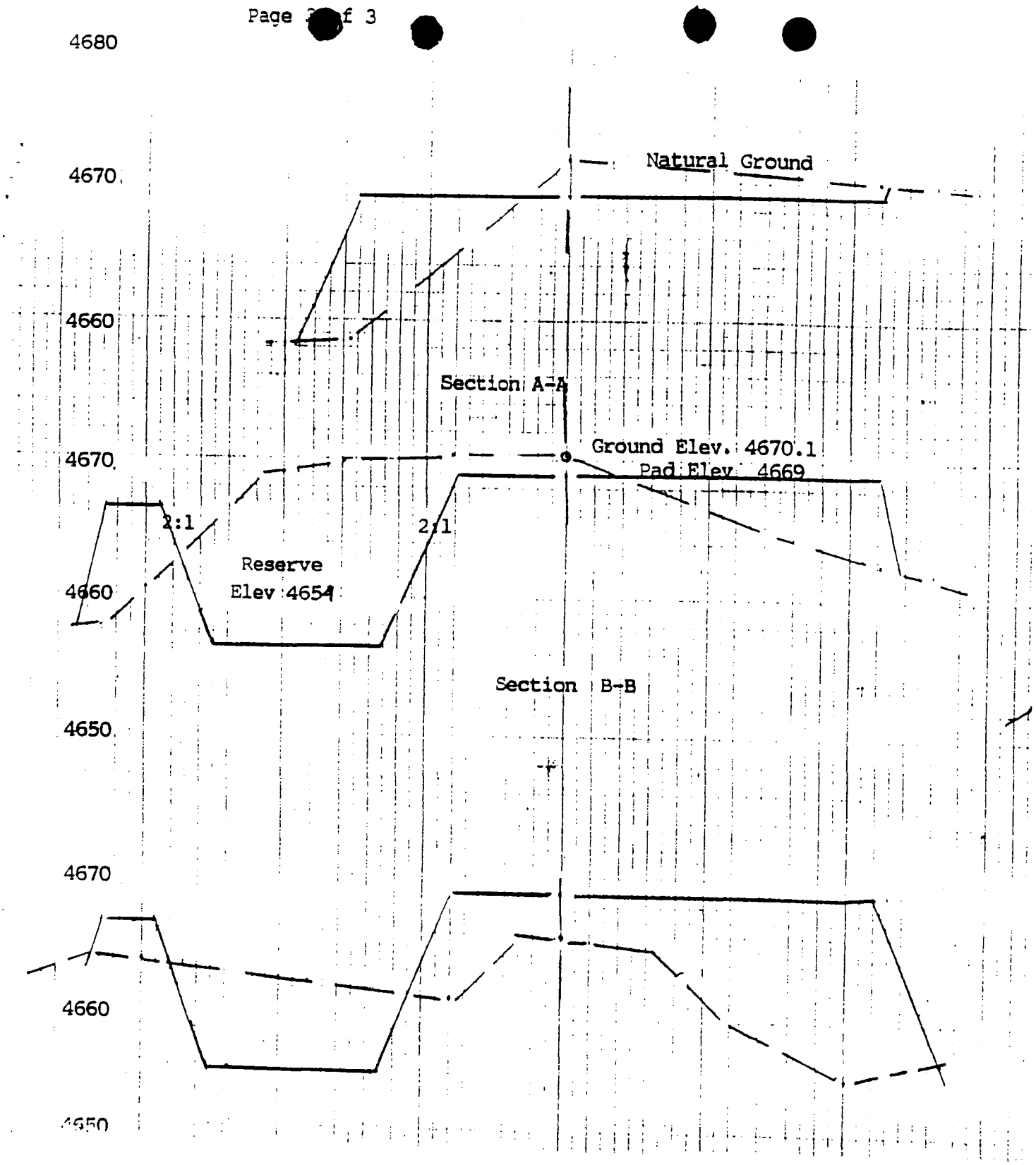


See page 3 for cross sections



Horiz. Scale - 1"=50'
Vertical Scale - 1"=10'

AMENDED

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL ECPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

9. WELL NO.: 21-24

3. ADDRESS OF OPERATOR: P O BOX 633 MIDLAND TX 79702

10. FIELD AND POOL, OR WILDCAT

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2063.5' FWL 487' FSL
At proposed prod. zone: SAME

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.21 T41S R24E SWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 5 MILES SE OF MONTEZUMA CREEK, UTAH

12. COUNTY OR PARISH: SAN JUAN | 13. STATE: UT

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 487' SE FROM THE RATHERFORD UNIT LEASE LINE

16. NO. OF ACRES IN LEASE: 2161

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40 ACRES

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320' EAST OF 21-14

19. PROPOSED DEPTH: 6000

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GL - 4670.1

22. APPROX. DATE WORK WILL START*: NOV. 15, 1993

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
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SEE ATTACHED 8 POINT WELL CONTROL PLAN FOR ADDITIONAL DRILLING INFORMATION

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RECEIVED
OCT 29 1993
DIV. OF OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 10-25-93

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE OF UTAH
OIL, GAS, AND MINING
DATE: 11-3-93
BY: R.K. Matthews
WELL SPACING: 649-2-3

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5' FWL 487' FSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

Eight Point Drilling Program

1. ESTIMATED FORMATION TOPS*

Formation	Depth from GL	Drill Depth	Subsea Depth
Chinle	992.1	1004.1	3387.9
DeChelly SS	2312.1	2324.1	2037.9
Hermosa LS	4317.1	4329.1	112.9
Ismay LS	5072.1	5084.1	-712.1
L. Ismay Ls	5192.1	5204.1	-847.1
Gothic Shale	5207.1	5219.1	-857.1
Desert Creek I	5222.1	5234.1	-872.1
Desert Creek II	5292.1	5304.1	-932.1
Chimney Rock	5392.1	5404.1	-1042.1
TD	6000	6012	-1317.9

* All depths based on ground level of 4670.1

2. NOTABLE ZONES

The estimated formation top depths from GL at which water, oil, gas, or other mineral bearing zones may be encountered are:

Possible Water Zone	Possible Coal Zone	Possible Oil or Gas Zones
DeChelly SS 2620'		Desert Creek I 5530' Desert Creek II 5600'

Propose to drill, complete, and equip an oil producer in the Desert Creek formation.

The well will be cased throughout its length and cemented to the surface, if possible.

3. PRESSURE CONTROL (See "5" on Page 3)

The drilling contract has not yet been awarded, thus the exact types of BOP's to be used are not yet known. Examples of a typical BOP and choke manifold are on Page 3. Maximum anticipated surface pressure will be 2,000 psi.

Once out from under the surface casing, a minimum 11" 3,000 psi system will be used with two hydraulic rams (blind/pipe). The choke manifold will have a minimum 3,000 psi rating.

BOP's will be tested to their working pressure after nippling up and after any use under pressure. Pipe rams will be function tested daily. Blind rams will be function tested after each trip out of the hole. BOP tests will be recorded on IADC reports.

Upper and lower kelly valves, floor safety valve, and drill string inside BOP rated at a minimum 3,000 psi will be maintained on the floor at all times. Upper and lower kelly valves with handler available will be in use at all times. Back pressure and full opening drill string safety valves to fit all drill strings in use will be available on the rig floor at all times.

Form 3160-3
(November 1983)
(formerly 9-331C)

AMENDED

SUBMIT TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL ECPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

9. WELL NO.: 21-24

3. ADDRESS OF OPERATOR: P O BOX 633 MIDLAND TX 79702

10. FIELD AND POOL, OR WILDCAT

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2063.5' FWL 487' FSL
At proposed prod. zone: SAME SE¼ SW¼

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.21 T41S R24E SWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 5 MILES SE OF MONTEZUMA CREEK, UTAH

12. COUNTY OR PARISH: SAN JUAN | 13. STATE: UT

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 487' SE FROM THE RATHERFORD UNIT LEASE LINE

16. NO. OF ACRES IN LEASE: 2161

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40 ACRES

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320' EAST OF 21-14

19. PROPOSED DEPTH: 6000

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GL - 4670.1

22. APPROX. DATE WORK WILL START*: NOV. 15, 1993

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48#	80'	111 ft³ (Circ to Surf)
11	8 5/8	24#	1600'	540 ft³ (Circ to Surf)
7 7/8	5 1/2	15.5#	6000	1403 ft³ (Circ to Surf)

SEE ATTACHED 8 POINT WELL CONTROL PLAN FOR ADDITIONAL DRILLING INFORMATION

This production area has H_2S; therefore, monitoring and safety equipment are required. Safety equipment will be rigged up by 3000'. Federal Requirements for equipment on this well are as follows:

1) Flare line and means of ignition
2) Remote controlled choke
3) Escape breathing apparatus for all crew members
4) H_2S sensors and associated audible/visual alarm(s)
5) At least one (1) portable H_2S monitor
6) Wind direction indicators
7) Caution/danger sign(s) and flag(s)
8) Mud-gas separator
9) Communication from wellsite

RECEIVED
OCT 29 1993
DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 10-25-93

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 11-8-93
BY: R. J. Matthews
WELL SPACING: 649-2-3

*See Instructions On Reverse Side

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Form 3160-3
(November 1983)
(formerly 9-331C)

AMENDED

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL ECPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

9. WELL NO.: 21-24

3. ADDRESS OF OPERATOR: P O BOX 633 MIDLAND TX 79702

10. FIELD AND POOL, OR WILDCAT:

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At surface: 2063.5' FWL 487' FSL
At proposed prod. zone: SAME

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC.21 T41S R24E SWSW

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 5 MILES SE OF MONTEZUMA CREEK, UTAH

12. COUNTY OR PARISH: SAN JUAN | 13. STATE: UT

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19. PROPOSED DEPTH: 6000

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GL - 4978

22. APPROX. DATE WORK WILL START*: NOV. 15, 1993

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SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
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8) Mud-gas separator
9) Communication from wellsite

RECEIVED
OCT 12 1993
DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 10-8-93

(This space for Federal or State office use)

PERMIT NO. 43-037-31720 APPROVAL DATE

APPROVED BY TITLE

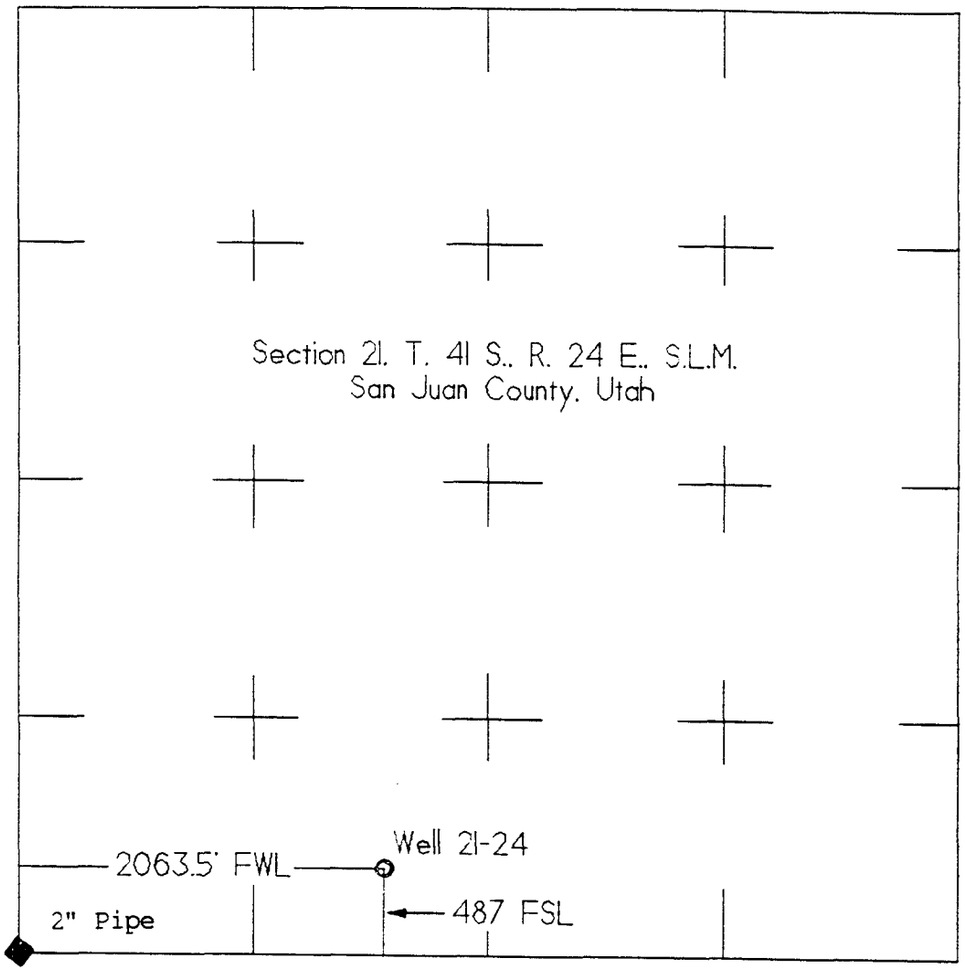
CONDITIONS OF APPROVAL, IF ANY:

OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 11/8/93
BY:
WELL SPACING: 649-2-3

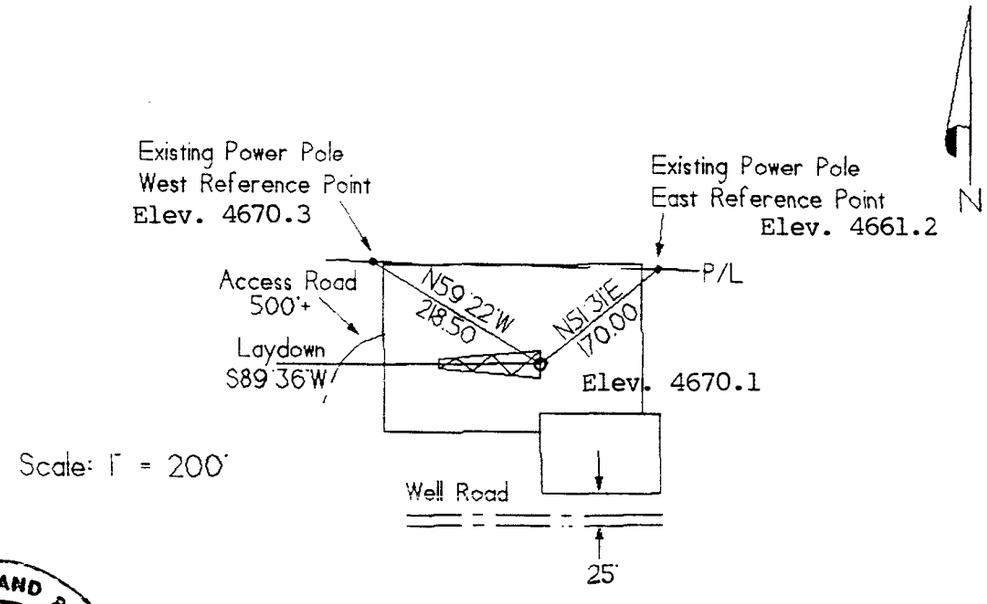
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

MOBIL OIL COMPANY
Well 21-24
Ratherford Unit. SE/4 SW/4 Section 21



Scale: 1" - 1000'



Scale: 1" = 200'

REGISTERED LAND SURVEYOR
No. 5705
GERALD G. HUDDLESTON
STATE OF UTAH

MANESS AND ASSOCIATES, INC.
SURVEYING

PO BOX 1163
215 N. Linden
Cortez, Colorado
565-8845

RADIUS OF EXPOSURE

10ppm Radius of Exposure calculated at 83'.

Maximum releasable H_2S calculated at 0.9 lbs/day, based on maximum measured H_2S concentration in a producing well gas stream (100ppm), and 100 MCFD maximum theoretical gas release volume. Maximum theoretical daily gas volume based on lease GOR of 500, and optimistic well test of 200 BOPD.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator
   MOBIL OIL CORPORATION
3. Address and Telephone No.
   P O BOX 633 MIDLAND, TX 79702 (915) 688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   487' FNL, 2063.5' FWL SEC.21, T41S, R24E SWSW

5. Lease Designation and Serial No.
   14-20-603-355
6. If Indian, Allottee or Tribe Name
   NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation
   RATHERFORD UNIT
8. Well Name and No.
   21-24
9. API Well No.
   NA
10. Field and Pool, or Exploratory Area
    GREATER ANETH
11. County or Parish, State
    SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

AMEND SURFACE USAGE PLAN FOR APD.
5.WATER SUPPLY – WATER WILL BE TRUCKED FROM PRIVATE LAND.

RECEIVED
OCT 18 1993
DIVISION OF
OIL, GAS & MINING

10-19-93

14. I hereby certify that the foregoing is true and correct

Signed Shirley Todd SHIRLEY TODD Title ENV. & REG. TECHNICIAN Date 10-12-93

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5' FWL 487' FSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

Eight Point Drilling Program

1. ESTIMATED FORMATION TOPS*

Formation	Depth from GL	Drill Depth	Subsea Depth
Chinle	992.1	1004.1	3387.9
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Chimney Rock	5392.1	5404.1	-1042.1
TD	6000	6012	-1317.9

* All depths based on ground level of 4670.1

2. NOTABLE ZONES

The estimated formation top depths from GL at which water, oil, gas, or other mineral bearing zones may be encountered are:

Possible Water Zone	Possible Coal Zone	Possible Oil or Gas Zones
DeChelly SS 2620'		Desert Creek I 5530' Desert Creek II 5600'

Propose to drill, complete, and equip an oil producer in the Desert Creek formation.

The well will be cased throughout its length and cemented to the surface, if possible.

3. PRESSURE CONTROL (See "5" on Page 3)

The drilling contract has not yet been awarded, thus the exact types of BOP's to be used are not yet known. Examples of a typical BOP and choke manifold are on Page 3. Maximum anticipated surface pressure will be 2,000 psi.

Once out from under the surface casing, a minimum 11" 3,000 psi system will be used with two hydraulic rams (blind/pipe). The choke manifold will have a minimum 3,000 psi rating.

BOP's will be tested to their working pressure after nippling up and after any use under pressure. Pipe rams will be function tested daily. Blind rams will be function tested after each trip out of the hole. BOP tests will be recorded on IADC reports.

Upper and lower kelly valves, floor safety valve, and drill string inside BOP rated at a minimum 3,000 psi will be maintained on the floor at all times. Upper and lower kelly valves with handler available will be in use at all times. Back pressure and full opening drill string safety valves to fit all drill strings in use will be available on the rig floor at all times.

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5' FWL 487' FSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

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Mobil Oil Corporation
Ratherford Unit #21-24
2063.5 FWL 487' fSL
Section 21, T-41-S, R-24-E
San Juan County, Utah

4. CASING & CEMENTING

Hole Size	O.D.	Weight	Grade	Conn.	Age	Setting Depth (GL)
17-1/2"	13-3/8"	48#	H40	ST&C	New	0000' - 0080'
11"	8-5/8"	24#	USS50	ST&C	New	0000' - 1600'
7-7/8"	5-1/2"	15.5#	USS50	LT&C	New	0000' - 6000

Surface Casing (0' to 80'): Cement to surface with 111 ft^3. Volume calculated with 100% excess. Ready-Mix cement.

Intermediate Casing (0' to 1600'): Cement to surface with 540 ft^3. Volume calculated with 30% excess. Lead with slurry of 65:35:6 "B" Poz + 2% $CaCl_2$. Tail with Class "B" + 2% $CaCl_2$. Total of 12 centralizers and one stop collar. One on the shoe joint and one every third collar to 200' from surface.

Production Casing (0' to 6000): Cement to surface with 1403 ft^3. Volume calculated with 50% excess. Lead with slurry of 50/50 "G" Poz + 8% Gel + .75% Halad-344. Tail with slurry of Premium Cement + 0.05 gal/sx D-AIR-3 + 2.0 gal/sx Latex 2000 + 0.22 gal/sx 434B + 0.5% CFR-3 (Weight/Yield = 15.6/1.18). Total of 17 centralizers and 3 stop collars. One centralizer on the float shoe then every third collar.

5. MUD PROGRAM

Depth	Type	Weight	Viscosity	Fluid Loss
0000' - 1600'	FW/Spud Mud	8.4 - 8.8	35 - 45	NC
1600' - 5000'	FW/PHPA	9.0 - 11.5	36 - 48	NC
5000' - 6000'	FW/PHPA	10 - 11.5	36 - 48	10 - 15

6. CORING, TESTING, AND LOGGING

No cores are currently planned. Neutron, Dual Induction, and Sonic logs may be run. A few RFT tests may also be run.

7. DOWNHOLE CONDITIONS

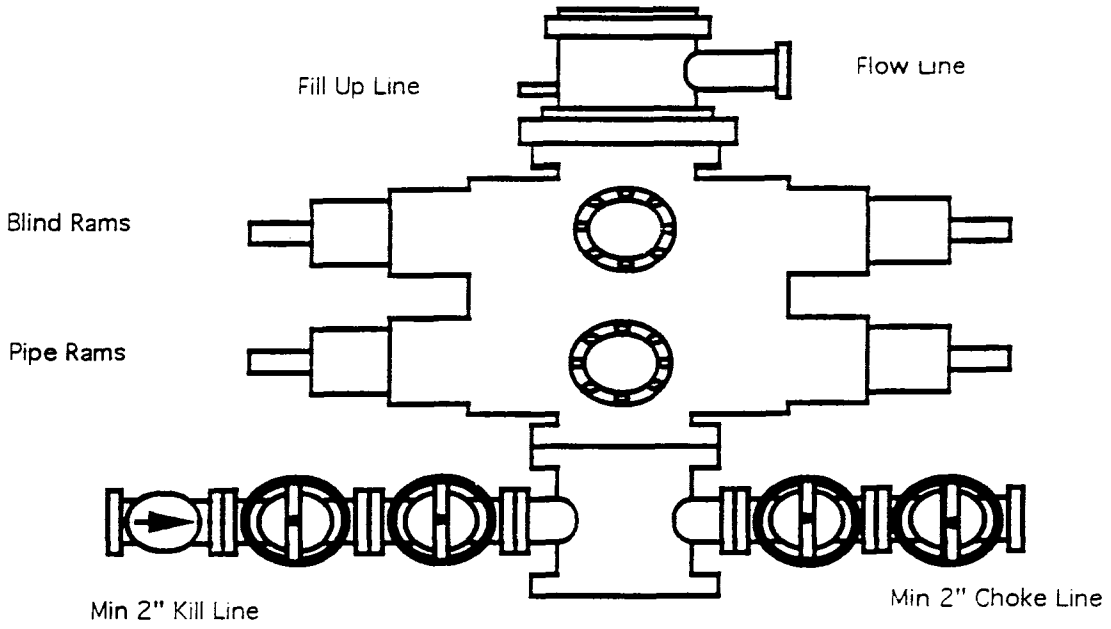
Possible water flows in the DeChelly formation may be encountered.

8. MISCELLANEOUS

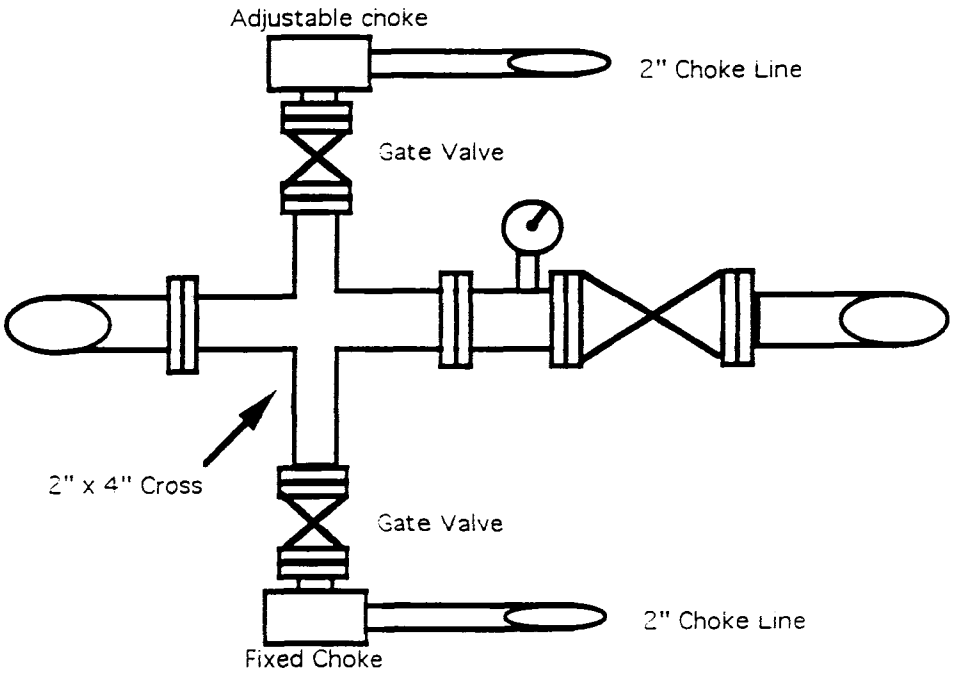
The anticipated spud date is November, 1993. It is expected to take +/- 24 days to drill the well and 10 days to complete the well.

Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
2063.5 FWL 487' FSL
San Juan Co., Utah

Bop Equipment
11" x 3000 psi Working Pressure



Choke Manifold
3000 psi



Mobil Oil Corporation
Ratherford Unit #21-24
Sec 21, T-41-S, R-24-E
2063.5 FWL 487' FSL
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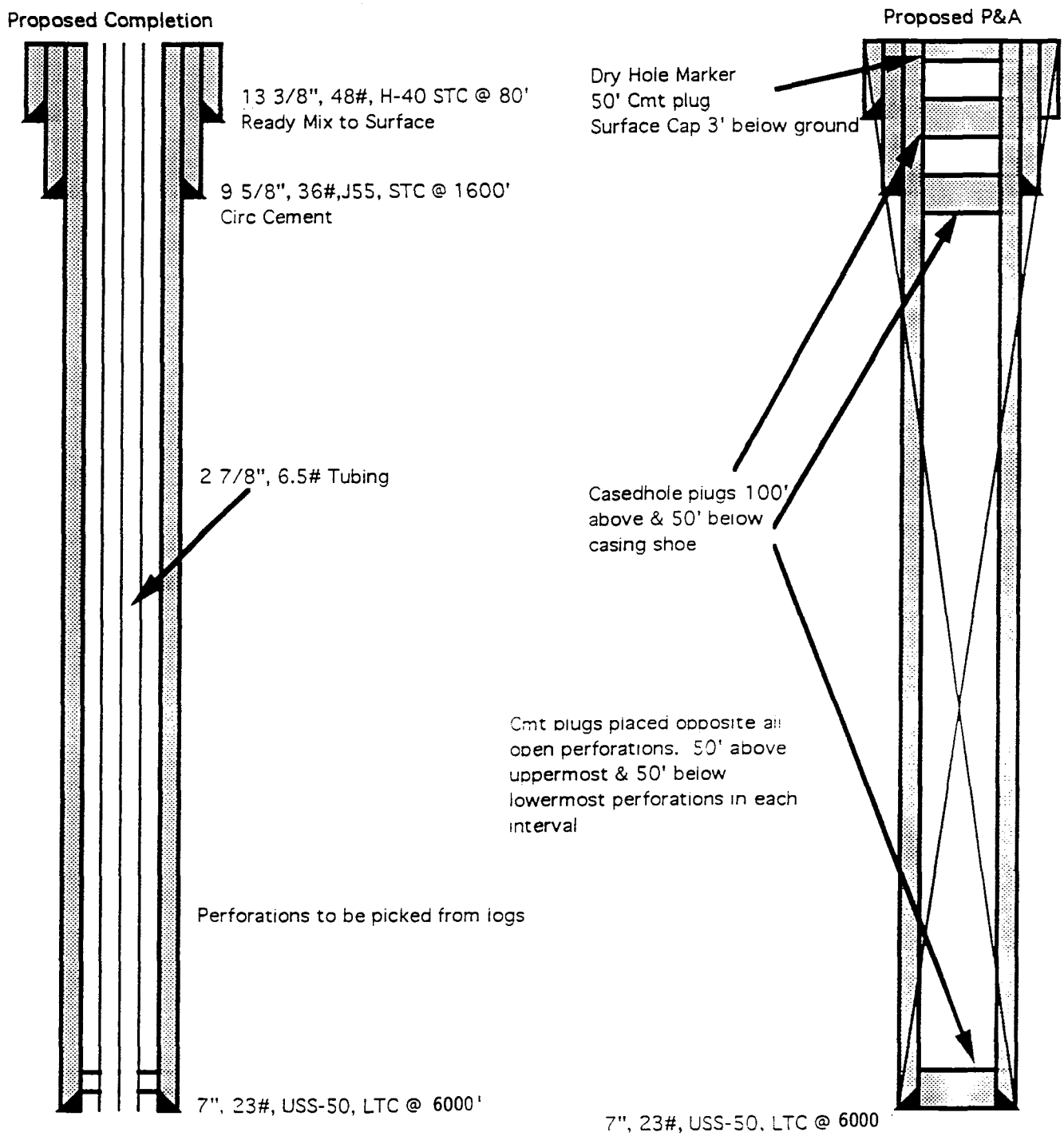


Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

1. DIRECTIONS & EXISTING ROADS

From the Montezuma Creek Post Office, go S 0.6 mi. on BIA Road N-5064.
Then turn left and go SW 2.8 mi. on paved BIA Road N-35.
Then turn left and go SE 1.8 mi. on a dirt field road.
Then turn right and go E 0.4 mi. on a dirt field road to the 21-24 well.

Roads will be maintained to a standard at least equal to their present condition. Existing roads need no upgrading.

2. ROAD TO BE BUILT

About 400' of new road will be built with a ≈16' wide travel surface within a maximum 25' wide disturbed corridor. No cattleguards or culverts are needed. Maximum cut of fill will be 5'. Maximum grade will be 9%.

3. EXISTING WELLS

There are nineteen oil, nine injection, and four P&A wells within a mile radius. All are shown on an attached map. There are no water or gas wells. All wells within a ≈754' radius are within the Ratherford Unit.

4. PROPOSED PRODUCTION FACILITIES

Production will be piped via a ≈5800' long surface (buried at road crossing) flowline north along the west side of roads to Satellite 21. No new tanks are needed. If the well is converted to an injector, then a ≈1000' long buried injection line will be laid south to an existing injection line at the 28-21 well. Surface disturbance will be limited to

that necessary for pipeline construction. All fill material will be removed from all drainages and the drainages returned to their natural form.

The ≈3.5" OD coiled steel tubing flowline will operate at ≈200 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, and will be laid on the surface except at road crossings. The ≤6" OD welded steel or coiled steel tubing injection line will operate at ≈1500 to ≈3500 psi, be tested to ≈5800 psi, has a burst rating of ≈7200 psi, will be internally coated or lined, and will be buried at least 30" deep.

An above ground 3 phase 25kv ≈800' long raptor proof powerline will connect with existing powerlines on the south side of the wellpad.

Above ground structures and equipment (only a pump jack is planned) will be painted with non-glare sand (federal standard 595a-30277) or Mobil beige 12-F-38 color.

5. WATER SUPPLY

Water will be trucked from a BLM (San Juan RA of the Moab District) artesian well in NENW 27-40s-23e. Mobil has permission from the Monticello BLM office.

6. CONSTRUCTION MATERIALS & METHODS

Beware of overhead powerlines along the south isde of the pad. Since no topsoil is present, no soil or brush will be stripped and stored. A 24" high berm will be built along the fill sides of the pad. A minimum 12 mil plastic liner will be installed in the reserve pit. No rock surfacing is planned.

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

7. WASTE DISPOSAL

The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The 4th side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, contents of the reserve pit will be buried in place. An overhead net will be installed after drilling is finished.

All trash will be placed in a portable trash cage. It will be hauled to an approved landfill. Human waste will be disposed of in 10' deep ratholes under trailers or in chemical toilets. Ratholes will be filled when the trailers are removed.

8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers will be on location for the company man, tool pusher, and mud loggers.

9. WELL SITE LAYOUT

See attached pages for depictions of the well pad, cross sections, cut and fill diagrams, reserve pit, trash cage, access road onto the location, parking, living facilities, soil stockpile, and rig orientation.

10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for a reserve pit to fully evaporate. Rock surfacing material will be removed before starting reclamation. All disturbed areas will be recontoured to a natural shape to blend with the surrounding topography.

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Stockpiled topsoil will be evenly spread. Compacted areas will be plowed or ripped to a depth of 12"-16" before seeding. Seeding will be done between July 1 - August 31 or October 15 - November 30. No seeding will be done when the ground is muddy or frozen. Seed will be drilled 0.5" to 0.75" deep. If broadcast, the rate will be 150% of that shown below and the seed covered with a drag. If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed in the same manner.

SPECIES FOR ROAD & WELLPAD	*lbs/acre PLS*
Indian ricegrass (Oryzopsis hymenoides)	3
Galleta grass (Hilaria jamesii)	2
Needle & thread (Stipa comata)	2
Yellow sweetclover (Melilotus alba)	1
Four wing saltbush (Atriplex canescens)	2

The road will be blocked, water barred, and reclaimed in the same manner as the wellsite. Berms will be built at the top of all slopes. Water bars will be spaced as follows:

% Slope	Spacing
1% - 5%	200 feet
6% - 15%	100 feet
>15%	50 feet

The injection line will be seeded (below) with a slightly different seed mix, but otherwise reclaimed in the same manner as the well and road. Berms will be built at the top of all slopes and road or trail crossings.

SPECIES FOR PIPELINE	*lbs/acre PLS*
Indian ricegrass	3
Giant dropseed	1
Sand dropseed	1

Mammoth wild rye	3
Four wing saltbush	3

11. SURFACE OWNER

The well, new road, powerline. and pipelines are all on Navajo Tribal Trust land in the Red Mesa Chapter. Any changes in the surface use plan must be approved by the BIA Branch of Natural Resources, P.O. Box 966, Shiprock, NM 87420. Call Randy Cornett at (505) 368-4427.

12. OTHER INFORMATION

The nearest hospital is a ≈75 minute drive away in northwest Monticello. It is 3 blocks northwest of the intersection of US 666 and US 191. Hospital phone number is (801) 587-2116. Or dial 1-800-332-1911 from anywhere in San Juan County, Ut. The closest medically equipped helicopter is in Farmington NM. Farmington hospital phone number is (505) 325-5011.

13. REPRESENTATION

Anyone having questions concerning the APD should contact:

Shirley Todd, Technician
Mobil Exploration & Producing U. S. Inc.
P.O. Box 633
Midland, Tx. 79702
(915) 688-2585

Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop
Santa Fe, NM 87505
(505) 984-8120

The field representative will be:

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

Ed Barber, Production Foreman
Mobil Exploration & Producing U. S. Inc.
P.O. Drawer G
Cortez, Co. 81321
(303) 565-9049

Mobil Exploration & Producing U. S. Inc. has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by Mobil Exploration & Producing U. S. Inc.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Mobil Exploration & Producing U. S. Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

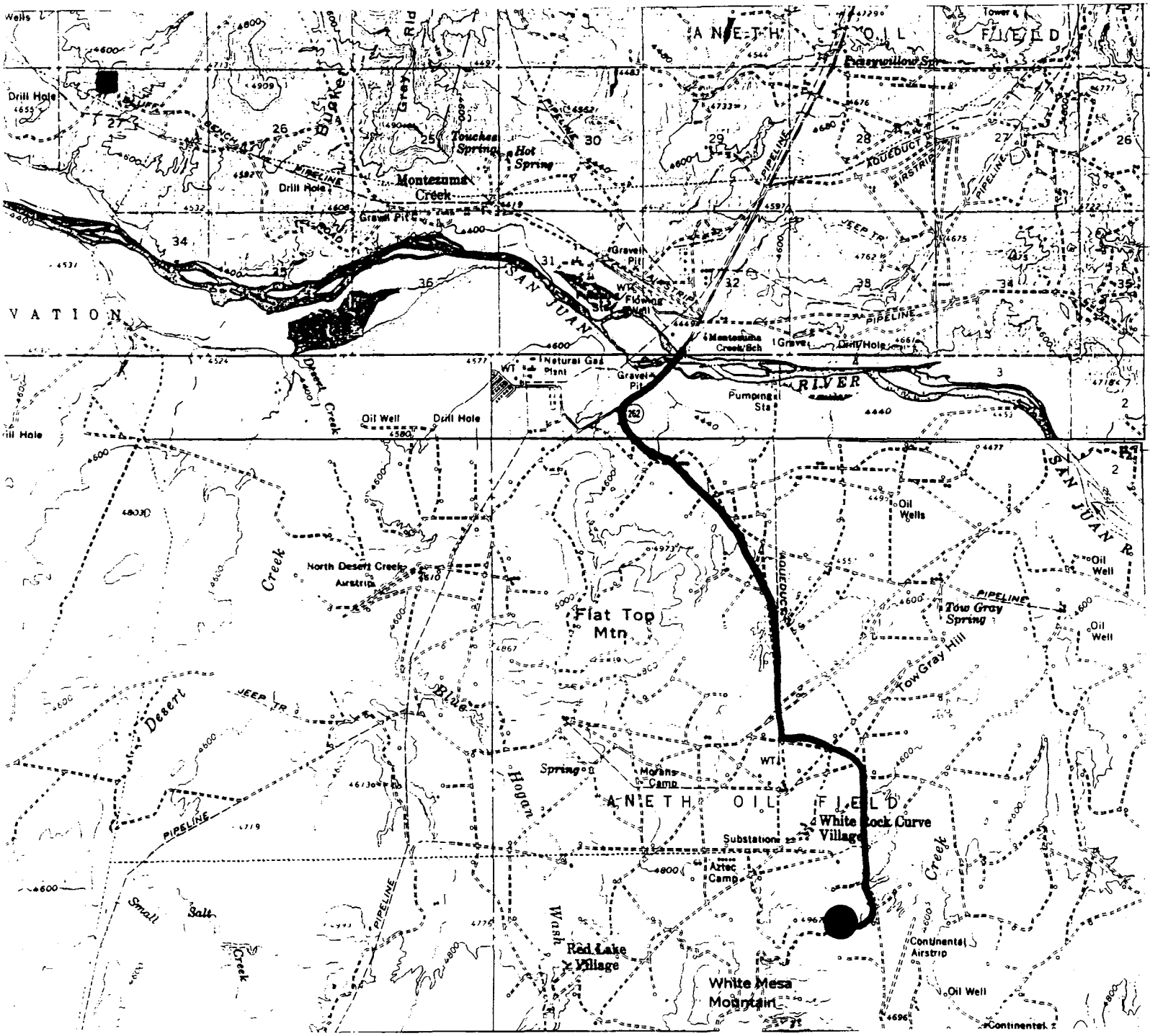
for Diane Klancher
Environmental Regulatory/LP Supervisor
Environmental & Regulatory Dept.
Mobil Exploration & Producing U. S. Inc.

9-23-93
Date

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

RECEIVED
OCT 12 1993
DIVISION OF
OIL, GAS & MINING



Proposed Well: ●

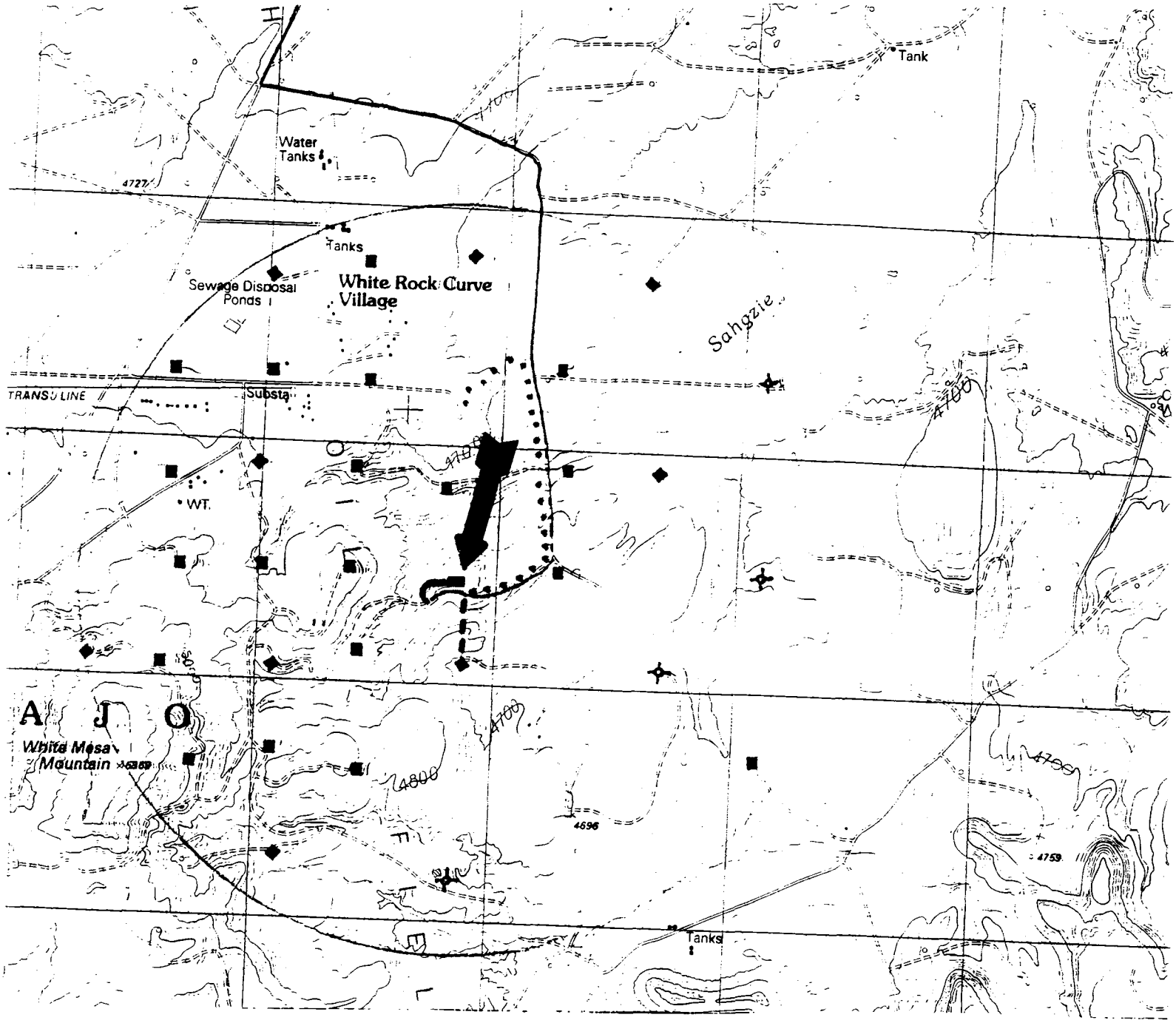
Access Road: ~

Water Source: ■

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah

RECEIVED
OCT 12 1993
DIVISION OF
OIL, GAS & MINING



Proposed 21-24 Well: ■

Existing Injection Well: ◆

Proposed Injection Line: ▬ ▬ ▬

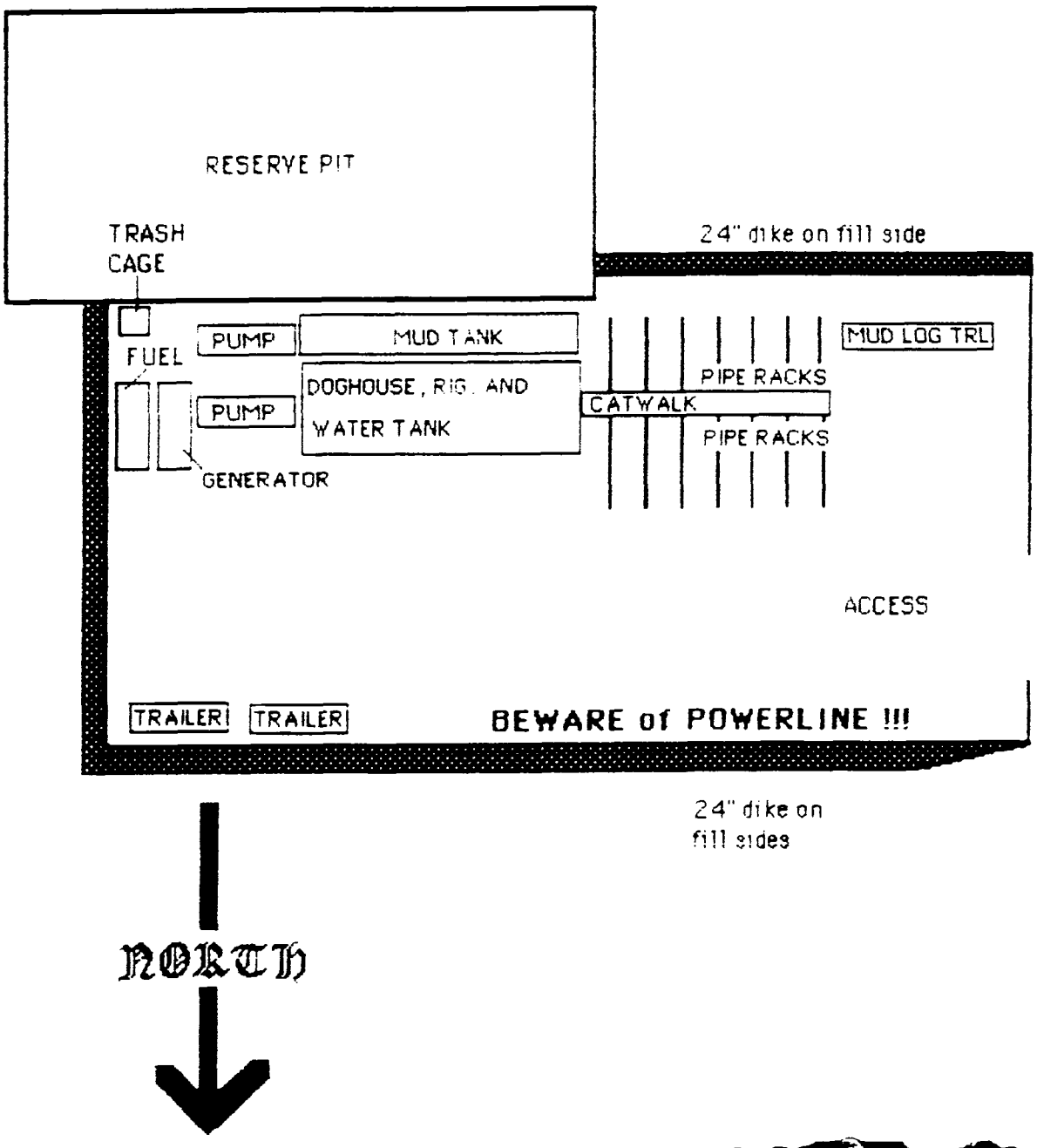
Existing Oil Well: ■

Proposed Flowline: • • • •

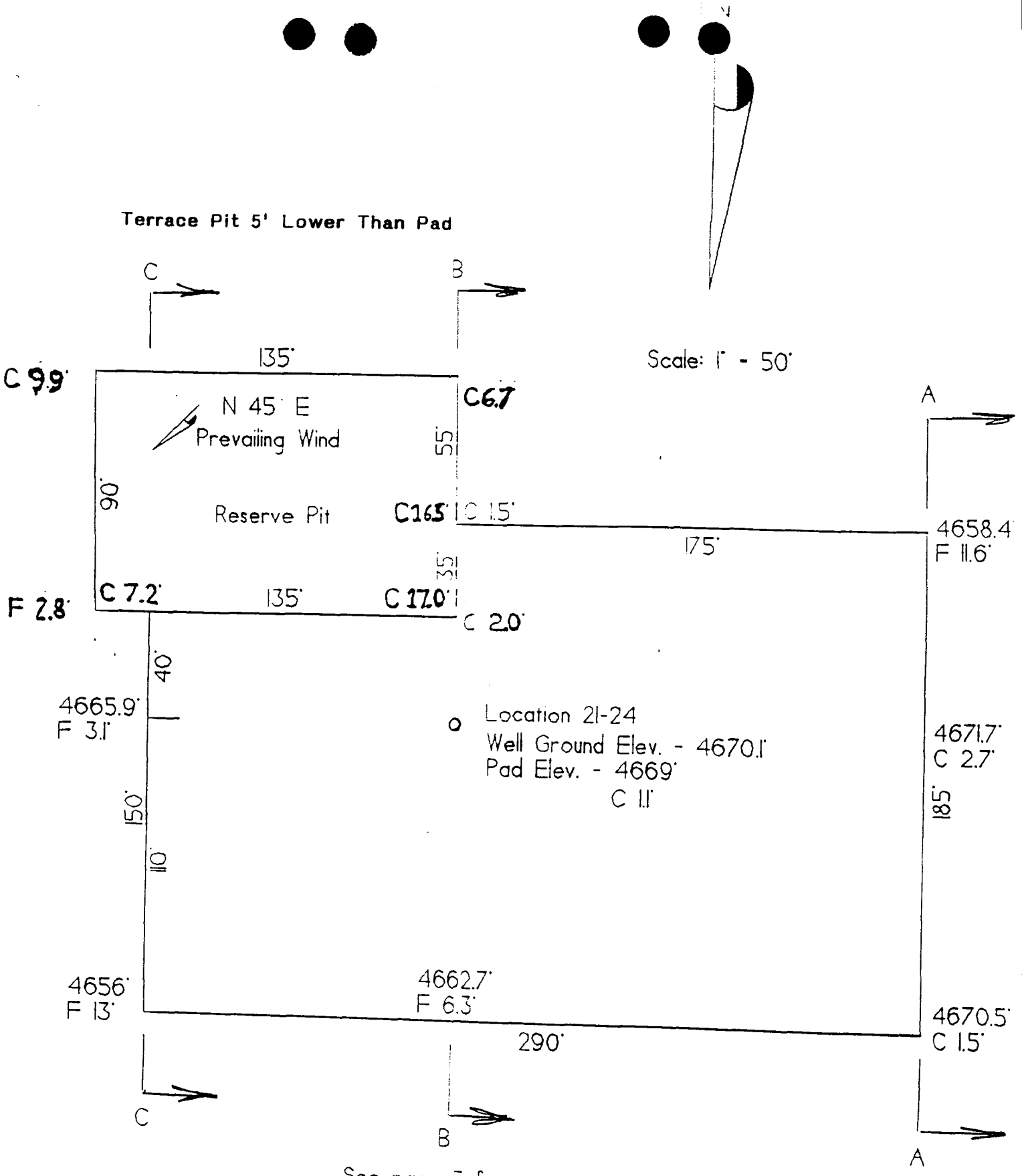
New Access Road: ☇

PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY

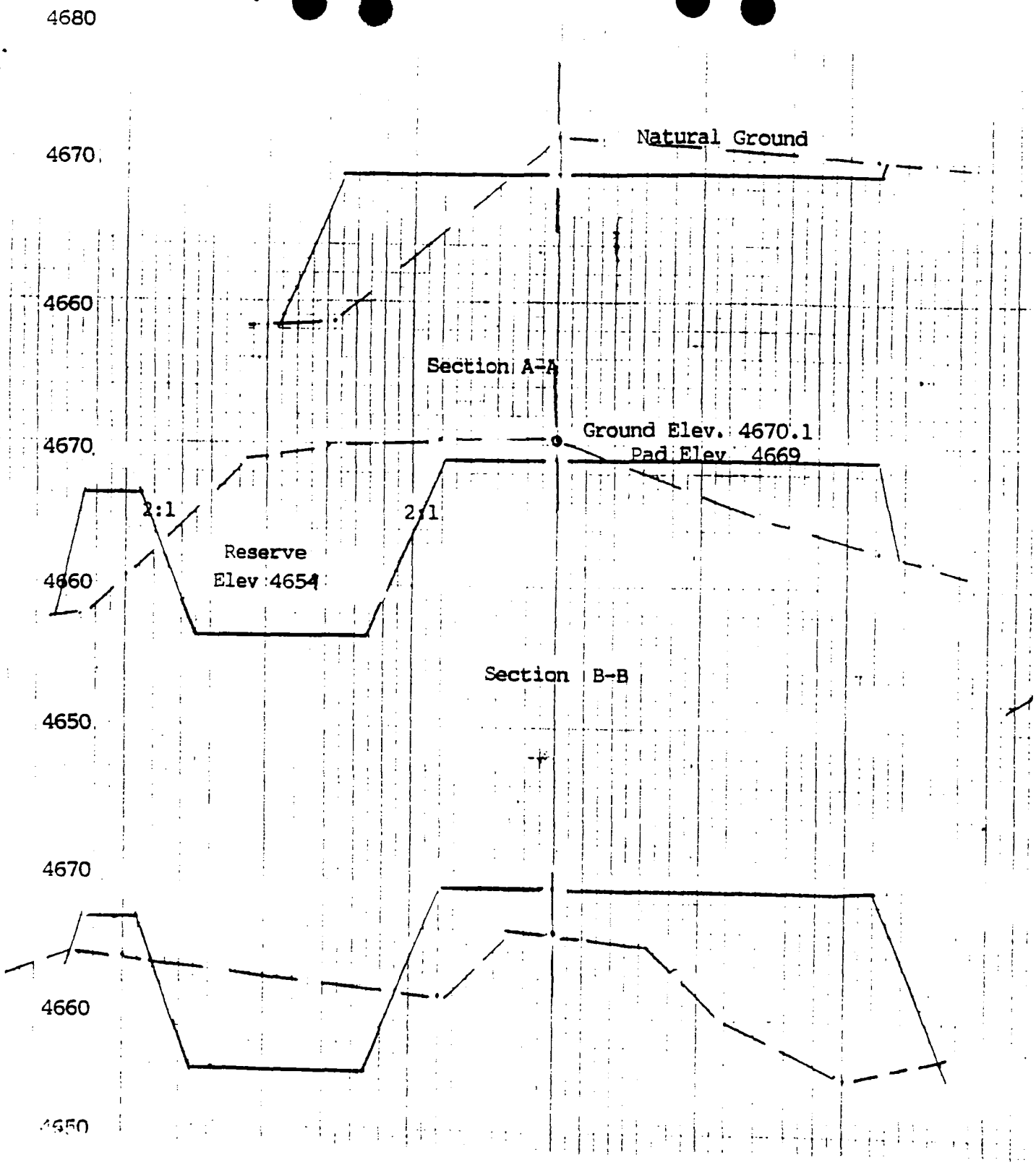
Mobil Exploration & Producing U.S. Inc.
Ratherford Unit 21-24
487' FSL & 2063.5' FWL
Sec. 21, T. 41 S., R. 24 E.
San Juan County, Utah



PERMITS WEST, INC.
PROVIDING PERMITS for the ENERGY INDUSTRY



See page 3 for cross sections



Horiz. Scale - 1"=50'
Vertical Scale - 1"=10'

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

November 8, 1993

Mobil Exploration & Producing U.S.
P.O. Box 633
Midland, Texas 79702

Re: Ratherford Unit 21-24 Well, 487' FSL, 2063' FWL, SE SW, Sec. 21, T. 41 S., R. 24 E., San Juan County, Utah

Gentlemen:

Pursuant to Utah Code Ann. § 40-6-18, (1953, as amended), Utah Admin. R. 649-2-3, Application of Rules to Unit Agreements and R. 649-3-4, Permitting of Wells to be Drilled, Deepened or Plugged-Back, approval to drill the referenced well is hereby granted.

In addition, the following specific actions are necessary to fully comply with this approval:

1. Compliance with the requirements of Utah Admin. R. 649-1 et seq., Oil and Gas Conservation General Rules.

2. Notification within 24 hours after commencing drilling operations.

3. Submittal of Entity Action Form, Form 6, within five working days following commencement of drilling operations and whenever a change in operations or interests necessitates an entity status change.

4. Submittal of the Report of Water Encountered During Drilling, Form 7.

5. Prompt notification prior to commencing operations, if necessary, to plug and abandon the well. Notify Frank R. Matthews, Petroleum Engineer, (Office) (801)538-5340, (Home) (801)476-8613, or Mike Hebertson, Oil and Gas Field Specialist, (Home) (801)269-9212.

6. Compliance with the requirements of Utah Admin. R. 649-3-20, Gas Flaring or Venting, if the well is completed for production.

This approval shall expire one year after date of issuance unless substantial and continuous operation is underway or a request for an extension is made prior to the approval expiration date. The API number assigned to this well is 43-037-31720.

Sincerely,

R.J. Firth
Associate Director, Oil and Gas

ldc
Enclosures
cc: San Juan County Assessor
Bureau of Land Management, Moab
WOI1

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: MOBIL OIL CO.

WELL NAME: RATHERFORD UNIT 21-24

API NO. 43-037-31720

Section 21 Township 41S Range 24E County SAN JUAN

Drilling Contractor ARAPHOE

Rig # 2

SPUDDED: Date 12/28/93

Time MIDNIGHT

How ROTARY

Drilling will commence

Reported by SCOTT CAMPBELL

Telephone # 1-303-560-7626

Date 12/27/93 SIGNED MKH

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR/MPTM, MEPNA, MOBIL OIL CO

3. Address and Telephone No.
P O BOX 633 MIDLAND, TX. 79702 (915) 688-2585

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
2063.5 FWL 487 FSL SEC.21, T41S, R24E SWSW

5. Lease Designation and Serial No.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

8. Well Name and No.
21-24

9. API Well No.
43-037-31720

10. Field and Pool, or Exploratory Area
GREATER ANETH

11. County or Parish, State
SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other SPUD	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

12-27-93 SPUD NOTIFICATION TO BLM & THE STATE OF UTAH
12-28-93 DRILL 17.5 IN. HOLE RAN 2 JTS 13 3/8 48# AT 93' W/200SX CL B CMT (1.18 YLD AT 15.6PPG W/2 CENT. CIRC TO SURF.
12-29-93 DRILL 12 1/4 HOLE. RAN 9 5/8 IN K55 36 WT TO 1570'. RAN 11 CENT. LEAD CMT W/475SX CL B + 2% CACL2 + 0.25 PPS FLOCELE + 1% ECONOLITE (YLD 1.84 AT 12.4 PPG). TAIL 625 SX CL B + 2% CACL2 + 0.25 PPG + 0.5% ECONOLITE (YLD 1.20 AT 15.6 PPG.

RECEIVED
JAN 13 1994
DIVISION OF
OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed Shirley Todd SHIRLEY TODD Title ENV. & REG. TECHNICIAN Date 1-7-94

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

***See Instruction on Reverse Side**

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR MOBIL EXPLORATION & PRODUCING U.S. INC. AS AGENT FOR MPTM?MEPNA OPERATOR ACCT. NO. N 7370

ADDRESS P O BOX 633
Midland, Tx 79702

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
B	6280		43-037-31717	Ratherford Unit #14-31		14	41S	23E	San Juan	11-16-93	11-16-93
WELL 1 COMMENTS: This is an oil well Entity previously added 12-22-93.											
B	99999	06280	43-037-31719	Ratherford Unit #19-13		19	41S	24E	San Juan	12-08-93	12-08-93
WELL 2 COMMENTS: This is an oil well Entity added 1-25-94. lee											
B	99999	06280	43-037-31720	Ratherford Unit #21-24		21	41S	24E	San Juan	12-27-93	12-27-93
WELL 3 COMMENTS: This is an oil well Entity added 1-25-94. lee											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

RECEIVED
JAN 24 1994
DIVISION OF OIL, GAS & MINING

Shirley Todd
Signature
Env. & Reg Tech. 1-21-94
Title Date
Phone No. (915) 688-2585

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
MOBIL EXPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

3. Address and Telephone No.
P O BOX 633 MIDLAND TX 79702

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
2063.5' FWL, 487' FSL SEC. 21, T41S, R24E SWSW

5. Lease Designation and Serial No.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

8. Well Name and No.
21-24

9. API Well No.
43-037-31720

10. Field and Pool, or Exploratory Area
GREATER ANETH

11. County or Parish, State
SAN JUAN, UTAH

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other AMEND DRILLING PERMIT	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

AMENT CASING, CEMENT, & HOLE SIZE

HOLE SIZE	CASING	WEIGHT	QUANTITY OF CMT
17 1/2	13 3/8	48#	200 FT³ (CIRC. TO SURFACE)
12 1/4	9 5/8	36#	651 FT³ (CIRC. TO SURFACE)
8 3/4	7	23#	1086 FT³ (CIRC. TO SURFACE)

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS AND MINING
DATE: 1-25-94
BY: JR Matthews

RECEIVED
JAN 24 1994
DIVISION OF
OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Shirley Todd Title Env. & Reg. Technician Date 1-21-94

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Mobil Oil Corporation
Ratherford Unit #21-24
2063.5' FWL, 487' FSL
Section 21, T-41-S, R-24-E SWSW
San Juan County, Utah

4. CASING & CEMENT

Hole Size	O.D.	Weight	Grade	Conn	Age	Setting Depth (GL)
17 1/2	13 3/8"	48#	H40	ST&C	New	0000' - 0080'
12 1/4	9 5/8"	36#	J55	ST&C	New	0000' - 1600'
8 3/4	7"	23#	USS50	LT&C	New	0000' - 5300'
8 3/4	7"	23#	L80	LT&C	New	5300' - 5800'

Surface Casing (0' to 80'): Cement to surface with 200 ft^3. Volume calculated with 100% excess. Ready-Mix cement.

Intermediate Casing (0' to 1600): Cement to surface with 651 ft^3. Volume calculated with 30% excess. Lead with slurry of 65:35:6 "B" Poz + 2% $CaCl_2$. Tail with Class "B: + 2% $CaCl_2$. Total of 11 centralizers and one stop collar. One on the shoe joint and one every fourth collar to 200' from surface. Actual cement volume to be based on OH Caliper + 30% excess.

Production Casing (0 ' to 6000'): Cement to surface with 1086 ft^3 (via two stage cement job). Volume calculated with 30% excess. Lead with slurry of Class G + 3% Econolite + 0.25 gps Flocele (wt/yld = 11.5/2.70). Tail with Class G + 3 gps Latex 2000 + 0.05 gps Dair 3 + 0.5 gps 434 B + 0.5% CFR 3 (wt/yld = 15.8/1.18) or Flexcem. Total of 38 centralizers and 1 stop collar. One centralizer on the float shoe then every fourth collar. Actual cement volumes based on OH Caliper + 30% excess.

5. MUD PROGRAM

Depth	Type	Weight	Viscosity	Fluid Loss
0000 - 1600	FW/Spud Mud	8.4 - 8.8	35 - 45	NC
1600 - 5000	FW/PHPA	9.0 - 11.5	36 - 48	NC
5000 - 6000	FW/PHPA	9.5 - 11.5	36 - 48	10 - 15

6. CORING, TESTING, AND LOGGING

No cores are currently planned. Neutron, Dual Induction, and Sonic logs may be run. A few RFT tests may also be run.

7. DOWNHOLE CONDITIONS

Possible water flows in the DeChelly formation may be encountered.

8. MISCELLANEOUS

The anticipated spud date is November 1993. It is expected to take +/- 24 days to drill the well and 10 days to complete the well.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 28 1994

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator
   MOBIL OIL CORPORATION
3. Address and Telephone No.
   P.O. BOX 633, MIDLAND, TX 79702 (915)688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   2063.5' FWL 487' FSL SEC. 21, T41S, R24E SESW

5. Lease Designation and Serial No.
   14-20-603-355
6. If Indian, Allottee or Tribe Name
   NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation
   RATHERFORD UNIT
8. Well Name and No.
   21-24
9. API Well No.
   43-037-31720
10. Field and Pool, or Exploratory Area
    GREATER ANETH
11. County or Parish, State
    SAN JUAN, UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other 7" CSG	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

1-16-94 Run 113 jts. U.S. 50 23# & 13 jts L-80 7" csg. Cmt 1st stage - cmt shoe at 5648' w/524 sx lead Cl 'G' (12#/gal @ 2.38 yld) 3% econolite .05 gal/ per sk D Air 3 + .25# per sk flo seal. 24 sx interfac & 40 BBLS flexcem. Pump 110 BBLS FW & 72 BBLS mud. Open stage tool w/1700 psi circ. at 350 psi 80-90 BBLS. 2nd stage thru DV tool at 2903' w/10 BBLS FW. Cmt w/400 sx lead Cl 'B' (12#/G @ 2.38 yld) 3% econolite + 0,2% D Air + .25 gal per sk flo seal. 225sx tail (15.6#/gal @ 1.18 yld) Cl 'B' + .6% Halad 344 max. press. 962 psi Circ 18 BBLS cmt to surf.

14. I hereby certify that the foregoing is true and correct
Signed Shirley Todd SHIRLEY TODD Title Env. & Reg. Tech. Date 2-23-94

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

8. FARM OR LEASE NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: MOBIL EXPLORATION & PRODUCING U.S. AS AGENT FOR MPTM/MEPNA

9. WELL NO.: 21-24

3. ADDRESS OF OPERATOR: P O BOX 633 MIDLAND, TX 79702

FEB 28 1994

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 2063.5 FWL 487' FSL
At top prod. interval reported below: SAME
At total depth

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: SEC.21, T41S, R24E SESW

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31720	11-8-93	SAN JUAN	UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
12-27-93	1-16-94	1-25-94	GL-4670.1	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5648	5648		→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 5530-5550, 5562-5580 DESERT CREEK

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIGITAL, NEUTRON-DEN.-GR, DUAL-SFL-SP 1-24-94

27. WAS WELL CORED: YES

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	48#	93'	17 1/2	200sx CL B	NONE
9 5/8	36#	1570'	12 1/4	1100sx CL B	NONE
7	23#	5648'	8 3/4	524sx Cl G 40 BBLS FLEXCEM	NONE
		DV Tool @2903		625sx Cl B	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	SN 5597	TAC 5407

31. PERFORATION RECORD (*Interval, size and number*): 5562-80, 5530-50 W/4SPF

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5562-80, 5530-50	ACDZ W/4000 GAL 15% HCL. ACDZ W/3200 GAL 15% HCL
5530-50	ACDZ W/6800 GALS 15% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
1-30-94	2.5" X 2" X 24'	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
2-21-94	24			275	316	111	1149

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): SOLD

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: DIVIATION REPORT

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Shirley Todd Shirley Todd TITLE Env. & Reg. Tech DATE 2-23-94

***(See Instructions and Spaces for Additional Data on Reverse Side)**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DeChelly	2620		sand, shale
Hermosa	4625		limestone, shale
Ismay	5380		limestone, shale
L. Ismay	5500		limestone, shale
Gothic Shale	5515		shale
Desert Creek I	5530		shale
Desert Creek	5600		shale
Chimney Rock	5700		shale

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

ARAPAHOE DRILLING CO., INC.
P. O. BOX 26687
ALBUQUERQUE, NEW MEXICO 87125

STEVE SCHALK
PRESIDENT

FEB 28 1994

January 28, 1994

DEVIATION REPORT

Mobil Exploration
Ratherford 21-24
San Juan County, UT

Date	Depth	Deviation
12-28-93	40'	1/2 °
12-29-93	386'	1/4 °
	871'	1/4 °
	922'	1/4 °
12-30-93	1429'	1/4 °
	1570'	1/2 °
01-01-94	2075'	3/4 °
01-02-94	2621'	1 °
01-03-94	3051'	3/4 °
01-05-94	3587'	1/2 °
01-06-94	4136'	3/4 °
01-08-94	4655'	3/4 °
01-11-94	5155'	3/4 °
	5238'	3/4 °
01-13-94	5648'	3/4 °

I CERTIFY THE ABOVE TO BE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Larry H. Williams, Office Manager

1/28/94
Date

SWORN AND subscribed to this 28th day of January, 1994, by Larry H. Williams, known to me to be the Office Manager of Arapahoe Drilling Co., Inc.

My Commission Expires: June 7, 1997

Clair L. Stacey, Notary Public

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
14-20-603-355

6. If Indian, Allottee or Tribe Name
NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation
RATHERFORD UNIT

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
RATHERFORD UNIT 21-24

2. Name of Operator
MOBIL EXPLORATION & PRODUCING U.S.

9. API Well No.
43-037-31720

3. Address and Telephone No.
P O BOX 633 MIDLAND, TX 79702 **(915) 688-2585**

10. Field and Pool, or exploratory Area
GREATER ANETH

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
2063.5 FWL, 487 FSL SEC.21, T41S, R24E SESW

11. County or Parish, State
SAN JUAN **UT**

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other **WORKOVER**	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drill give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

3-07-94 MIRU POOH W/RODS & PUMP NU BOP POOH W/TBG. PERF 5438-58,5486-5518 W/4 SPF.
3-08-94 ACDZ PERFS 5438-5458 W/4750 GALS 15% ACID
3-09-94 ACDZ PERFS 5486-5518 W/4750 GALS 15% HCL & 1000 GALS 2 PPG
3-10-94 ACDZ PERFS 5438-5458 W/4800 GALS 15% HCL SWAB
3-11-94 REL PKR & BP RE-SET BP AT 5525 & PKR AT 5472 PUMP DOWN TBG & CK F/COMM RE-SET BP AT 5472 & PKR AT 5403 SWAB WELL REL PKR POOH W/TBG RUN PROD TBG & EQUIP RUN PUMP & RODS HANG WELL ON. RD MO

MAR 25 1994

14. I hereby certify that the foregoing is true and correct
Signed Shirley Todd Title **ENV. & REG TECHNICIAN** Date **3-21-94**

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*** See Instruction on Reverse Side**

Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-0603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

SEP 19

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

2. NAME OF OPERATOR: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 21-24

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland, TX 79702 (915) 688-2585

9. API WELL NO.: 43-037-31720

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 2063.5 FWL, 487' FSL
At top prod. interval reported below: SAME
At total depth

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 21;41S;24E; SESW

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31720	11/08/93	SAN JUAN	UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
12/27/93	01/16/94	01/25/94	GL-4670.1	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY →	ROTARY TOOLS	CABLE TOOLS
5648'	5648'			X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*
5530-5550, 5562-5580 DESERT CREEK

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN
DIGITAL, NEUTRON-DEN.-GR, DUAL-SFL-SP 1-24-94

27. WAS WELL CORED: NO

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13-3/8"	48#	93'	17-1/2"	200 SX CL B	NONE
9-5/8"	36#	1570'	12-1/4"	1100 SX CL B	NONE
7"	23#	5648'	8-3/4"	524 SX G; 40 BBLS FLEXCEM	NONE
		DV TOOL @	2903'	625 SX CL B	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	SN 5597'	TAC 5407'

31. PERFORATION RECORD (*Interval, size and number*)
5562-80', 5530-50' W/4 SPF

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5562-80,5530-50	ACDZ W/4000 GAL 15% HCL;ACDZ
	W/3200 GAL 15% HCL
5530-50'	ACDZ W/6800 GALS 15% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping - size and type of pump*)	WELL STATUS (*Producing or shut-in*)
01/30/94	2.5 X 2 X 24	PRODUCING

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
02/21/94	24			275	316	111	1149

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): SOLD

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: DEVIATION REPORT

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Q Irwin for Shirley Todd TITLE ENV. & REG. TECHNICIAN DATE 02/23/94

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdicton.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
DeChelly	2620		sand, shale
Hermosa	4625		limestone, shale
Ismay	5380		limestone, shale
Gothic Shale	5515		shale
Desert Creek I	5530		shale
Desert Creek	5600		shale
Chimney Rock	5700		shale

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

U.S. GOVERNMENT PRINTING OFFICE: 1992-774-672

Division of Oil, Gas and Mining

PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

[ ] Well File _____

_____

(Location) Sec___Twp___Rng___

(API No.) _____

[ ] Suspense

(Return Date) _____

(To - Initials) _____

[XXX] Other

OPER NM CHG

1. Date of Phone Call: 8-3-95 Time: _____

2. DOGM Employee (name) L. CORDOVA (Initiated Call [ ])

Talked to:

Name R. J. FIRTH (Initiated Call XX) - Phone No. (___) _____

of (Company/Organization) _____

3. Topic of Conversation: M E P N A / N7370

4. Highlights of Conversation:

OPERATOR NAME IS BEING CHANGED FROM M E P N A (MOBIL EXPLORATION AND PRODUCING NORTH AMERICA INC) TO MOBIL EXPLOR & PROD. THE NAME CHANGE IS BEING DONE AT THIS TIME TO ALLEVIATE CONFUSION, BOTH IN HOUSE AND AMONGST THE GENERAL PUBLIC.

*SUPERIOR OIL COMPANY MERGED INTO M E P N A 4-24-86 (SEE ATTACHED).

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

Routing:

1-LEC	7-PL
2-LWP	8-SJ
3-~~DTS~~	9-FILE
4-VLC	
5-RJF	
6-LWP	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

☐ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator XXX Operator Name Change Only

The operator of the well(s) listed below has changed (EFFECTIVE DATE: **8-2-95**)

TO (new operator) **MOBIL EXPLOR & PROD**	FROM (former operator) **M E P N A**
(address) **C/O MOBIL OIL CORP**	(address) **C/O MOBIL OIL CORP**
PO DRAWER G	**PO DRAWER G**
CORTEZ CO 81321	**CORTEZ CO 81321**
phone (303) 564-5212	phone (303)564-5212
account no. N7370	account no. N7370

Well(s) (attach additional page if needed):

Name: **** SEE ATTACHED ****	API: 037-31720	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:
Name:	API:	Entity:	Sec	Twp	Rng	Lease Type:

OPERATOR CHANGE DOCUMENTATION

N/A 1. (Rule R615-8-10) Sundry or other legal documentation has been received from former operator (Attach to this form).

N/A 2. (Rule R615-8-10) Sundry or other legal documentation has been received from new operator (Attach to this form).

N/A 3. The Department of Commerce has been contacted if the new operator above is not currently operating any wells in Utah. Is company registered with the state? (yes/no) _____ If yes, show company file number: _____.

N/A 4. **(For Indian and Federal Wells ONLY)** The BLM has been contacted regarding this change (attach Telephone Documentation Form to this report). Make note of BLM status in comments section of this form. Management review of **Federal and Indian** well operator changes should take place prior to completion of steps 5 through 9 below.

Lec 5. Changes have been entered in the Oil and Gas Information System (Wang/IBM) for each well listed above. (8-3-95)

LWP 6. Cardex file has been updated for each well listed above. 8-31-95

LWP 7. Well file labels have been updated for each well listed above. 9-28-95

Lec 8. Changes have been included on the monthly "Operator, Address, and Account Changes" memo for distribution to State Lands and the Tax Commission. (8-3-95)

Lec 9. A folder has been set up for the Operator Change file, and a copy of this page has been placed there for reference during routing and processing of the original documents.

– OVER –

OPERATOR CHANGE WORKSHEET (CONTINUED) Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

Lec 1. (Rule R615-8-7) Entity assignments have been reviewed for all wells listed above. Were entity changes made? (yes/no) ___ (If entity assignments were changed, attach copies of Form 6, Entity Action Form).

N/A 2. State Lands and the Tax Commission have been notified through normal procedures of entity changes.

BOND VERIFICATION (Fee wells only) * No Fee Lease Wells at this time!

N/A/Lec 1. (Rule R615-3-1) The new operator of any fee lease well listed above has furnished a proper bond.

___ 2. A copy of this form has been placed in the new and former operators' bond files.

___ 3. The former operator has requested a release of liability from their bond (yes/no) ___. Today's date _____ 19___. If yes, division response was made by letter dated _____ 19___.

LEASE INTEREST OWNER NOTIFICATION RESPONSIBILITY

N/A 1. (Rule R615-2-10) The former operator/lessee of any **fee lease** well listed above has been notified by letter dated _____ 19___, of their responsibility to notify any person with an interest in such lease of the change of operator. Documentation of such notification has been requested.

VTS 8/5/95

N/A 2. Copies of documents have been sent to State Lands for changes involving **State leases**.

FILMING

✓ 1. All attachments to this form have been microfilmed. Date: October 6 19 95.

FILING

___ 1. Copies of all attachments to this form have been filed in each well file.

___ 2. The original of this form and the original attachments have been filed in the Operator Change file.

COMMENTS

950803 UIC F5/Not necessary!

FORM 10

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
355 West North Temple, 3 Triad, Suite 350, Salt Lake City, UT 84180-1203

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS:

C/O MOBIL OIL CORP
M E P N A
PO DRAWER G
CORTEZ CO 81321

UTAH ACCOUNT NUMBER: N7370

REPORT PERIOD (MONTH/YEAR): 6 / 95

AMENDED REPORT ☐ **(Highlight Changes)**

Well Name / API Number / Entity / Location	Producing Zone	Well Status	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
RATHERFORD 20-67 4303731590 06280 41S 24E 20	DSCR					
RATHERFORD 20-68 4303731591 06280 41S 24E 20	DSCR					
RATHERFORD 20-66 4303731592 06280 41S 24E 20	DSCR					
RATHERFORD 24-32 4303731593 06280 41S 23E 24	DSCR					
RATHERFORD 19-97 4303731596 06280 41S 24E 19	DSCR					
RATHERFORD 11-43 4303731622 06280 41S 23E 11	DSCR					
THERFORD 14-41 4303731623 06280 41S 23E 14	DSCR					
RATHERFORD UNIT 14-31 4303731717 06280 41S 23E 14	DSCR					
RATHERFORD UNIT 19-13 4303731719 06280 41S 24E 19	DSCR					
RATHERFORD UNIT 21-24 4303731720 06280 41S 24E 21	DSCR					
			TOTALS			

OMMENTS: _____

hereby certify that this report is true and complete to the best of my knowledge. Date: _____

ame and Signature: _____ Telephone Number: _____

12/93)

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-355
6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL
7. If Unit or CA, Agreement Designation: RATHERFORD UNIT
8. Well Name and No.: RATHERFORD 21-24
9. API Well No.: 43-037-31720
10. Field and Pool, or exploratory Area: GREATER ANETH
11. County or Parish, State: SAN JUAN UT

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other SIDETRACK
2. Name of Operator: Mobil Exploration & Producing U.S. Inc. as Agent for Mobil Producing TX & NM Inc.
3. Address and Telephone No.: P.O. Box 633, Midland, TX 79702 915-688-2585
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 2064' FWL & 487' FSL SEC.21, T41S, R24E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other SIDETRACK	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

BHL: LATERAL #1 2404' NORTH & 2404' WEST F/SURFACE SPOT (ZONE 1a)

SEE ATTACHED PROCEDURE.

RECEIVED
SEP 02 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Shirley Hawkins Title ENV. & REG. TECHNICIAN Date 08-27-97

(This space for Federal or State office use)
Approved by John R. Baza Title Associate Director Date 9/10/97
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

WELL HISTORY

RATHERFORD UNIT #21-24
GREATER ANETH FIELD
487' FSL, 2063' FWL
SEC 21, T41S, R24E (SE/SW)
SAN JUAN COUNTY, UTAH

API #43-037-31720
PRISM ID 0043261

KB 4683' GL 4670'
TD 5648' PBTD 5635'

12-27-93 SPUDDED
17.5" hole. Ran 13-3/8" 48# H-40 csg SET @ 93' W/ 200 sx CMT (CIRC)
12-1/4" hole. Ran 9-5/8" 36# K-55 csg SET @ 1570' W/ 1100 sx cmt.
8-3/4" hole. Ran 7" 23# L-80 csg SET @ 5648' (DV tool at 2903'). Cmt'd w/ 524 sx 1st stage, 625 sx 2nd stage

01-29-94 ORIGINAL COMPLETION: RU BASIN WL, RUN GAMMA & COLLAR LOC. PERFORATE DC II ZONES 5530-5550' & 5562-5580' W/4" CENT HOLLOW CAR.GUNS 19 GR CHARGES 90 DEGREE PH. W/4SPF ALL SHOTS FIRED. RU DOWELL, WASH PERFS 5562-5580' W/1890 GAL 15% HCL @ 2.75 BPM W/970 PSI, SD 0 PSI. WASH PERFS 5530-5550' W/2100 GAL 15% HCL @ 2.75 BPM W/1180 PSI, SD 0 PSI. RIH W/7" BP & PKR. RU DOWELL & ACIDIZE PERFS 5562-80' W/ 3200 GAL 15% HCL. AIR 6 BPM AT 110#. ISIP 40#. ACIDIZED PERFS 5530-5550' W/ 6800 GAL 15% HCL & 2000 GAL 2#PPG RS MAX TP 1680 PSI, MAX RATE 6.5 BPM, ISIP 0 PSI. MADE 2 SWAB RUNS & KICKED OFF FLOWING. TBG IN HOLE 178 JTS 2-7/8" WS BP SET @ 5556'& PKR SET @ 5509'.

2-19-94 POOH PKR AND RBP. RIH W/ PROD EQUIPMENT. RWTP.

03-12-94 RIH w/ perf clean-tool, acidize perf interval w/ 4750 gals 15% acid as follows: 5486-5518' w/ 3000 gals & 5438-5458' w/ 1750 gals. Max TP 2560# AIR 2.75 bpm. ISIP 0#. Next day - acidize perf interval 5486-5518' w/ 4750 gals 15% HCL & 1000 gals 2 ppg salt div. Max P 170# @ 2 bpm. Next day - acidize perf interval 5438-5458' w/ 4800 gals 15% HCL. Pmpd 2450 gals acid @ 1/4 bpm. Max P 3710# - 2560#. Broke, increase rate to 7 bpm w/ 0#. Swab. Ran BHP's. RIH w/ prod tbg - 174 jts, SN @ ?, TAC @ ?.

03-25-94 Retr BP & Amerada bomb. RIH w/ prod tbg - SN @ 5588', TAC @ 5398', 178 jts 2.875" tbg.

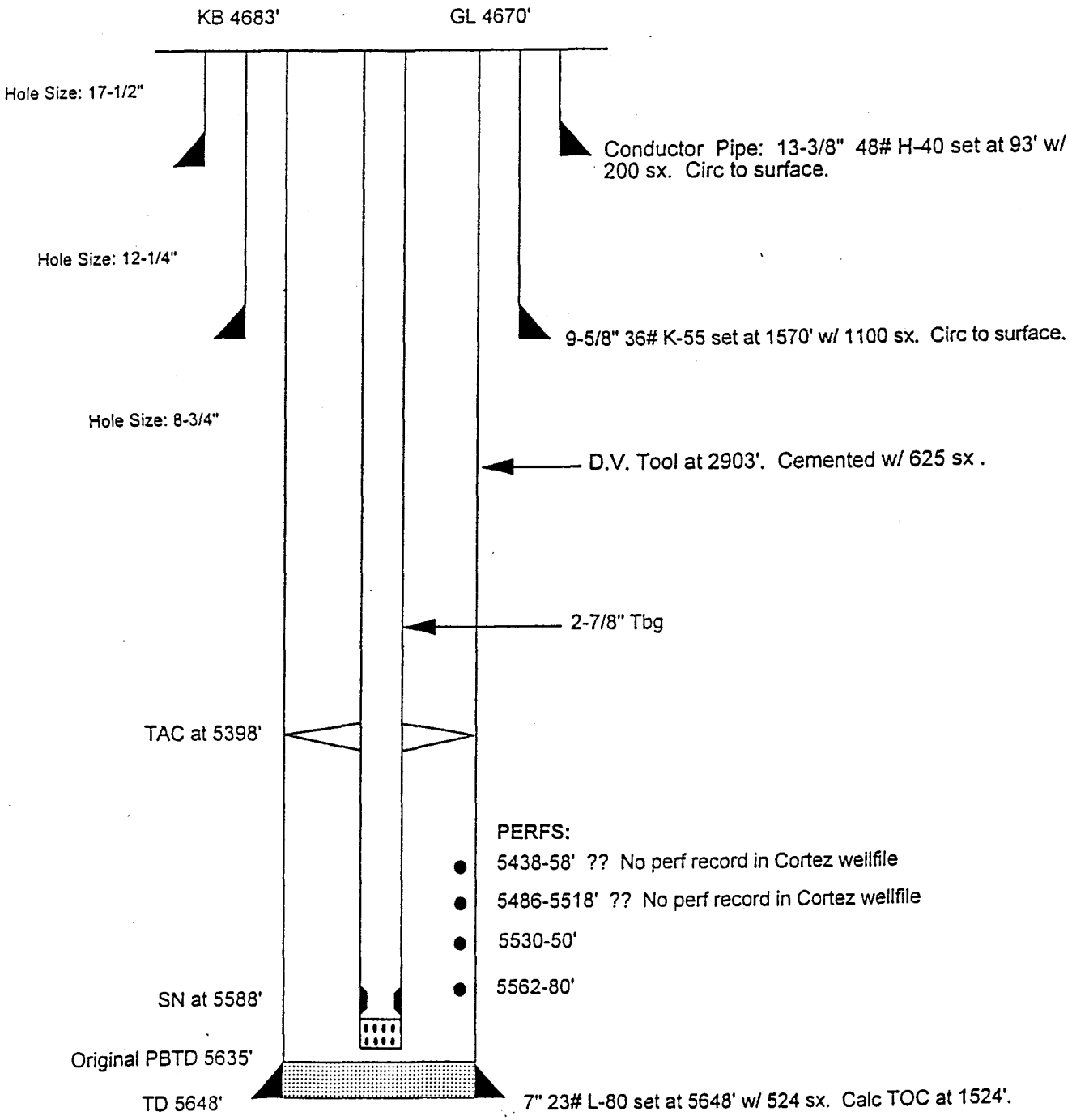
GOK 04-13-94
Checked by LA Tucker 8-5-96

RATHERFORD UNIT # 21-24

GREATER ANETH FIELD
487' FSL & 2063' FWL
SEC 21-T41S-R24E
SAN JUAN COUNTY, UTAH
API 43-037-31720
PRISM 0043261

PRODUCER

Capacities:	bbl/ft	gal/ft	cuft/ft
2-7/8" 6.5#	.00579	.2431	.0325
7" 23#	.0393	1.6535	.2210
2-7/8"x7"23#	.0313	1.3162	.1760



Ratherford Unit Well #21-24
Horizontal Drilling Procedure

The objective of this procedure is to prepare this wellbore for sidetracking, sidetrack the subject well and drill one short radius horizontal lateral (3400 ft).

1. Prepare location and dig working pit.

2. MIRU WSU, reverse unit, and H_2S equipment. Bullhead kill weight fluid down tubing.

3. ND wellhead and NU BOP's. Pressure test BOP's.

4. Continue to POH with tubing and ESP.

5. TIH with full gauge bit and casing scraper to PBTD or gage ring. TOH with bit and scraper.

6. Ensure well will circulate, and set CIBP above perfs. **Pressure test casing to 1000 psi.**

7. RDMO WSU.

8. MIRU 24 hr WSU.

9. PU tubing, drill collars, and drill pipe in derrick and run in hole. Then POH and stand back.

10. Run packer on wireline and set using GR/CCL log to correlate with. RD wireline.

11. PU drillpipe with UBHO sub in string with bottom trip whipstock.

12. Run gyro and obtain orientation whipstock face, set at bearing of interest.

13. POH w/ gyro. Shear pilot mill bolt and start milling window.

14. POH and PU window mill and watermelon mill to finish window and drill 2 ft of formation.

15. POH w/ mills and RBIH w/ new mills to clean up window.

16. PU drill pipe and directional motors to drill curve. Use the gyro to drill until the inclination dictates that the gyro must be pulled.

17. Finish drilling the curve using the MWD.

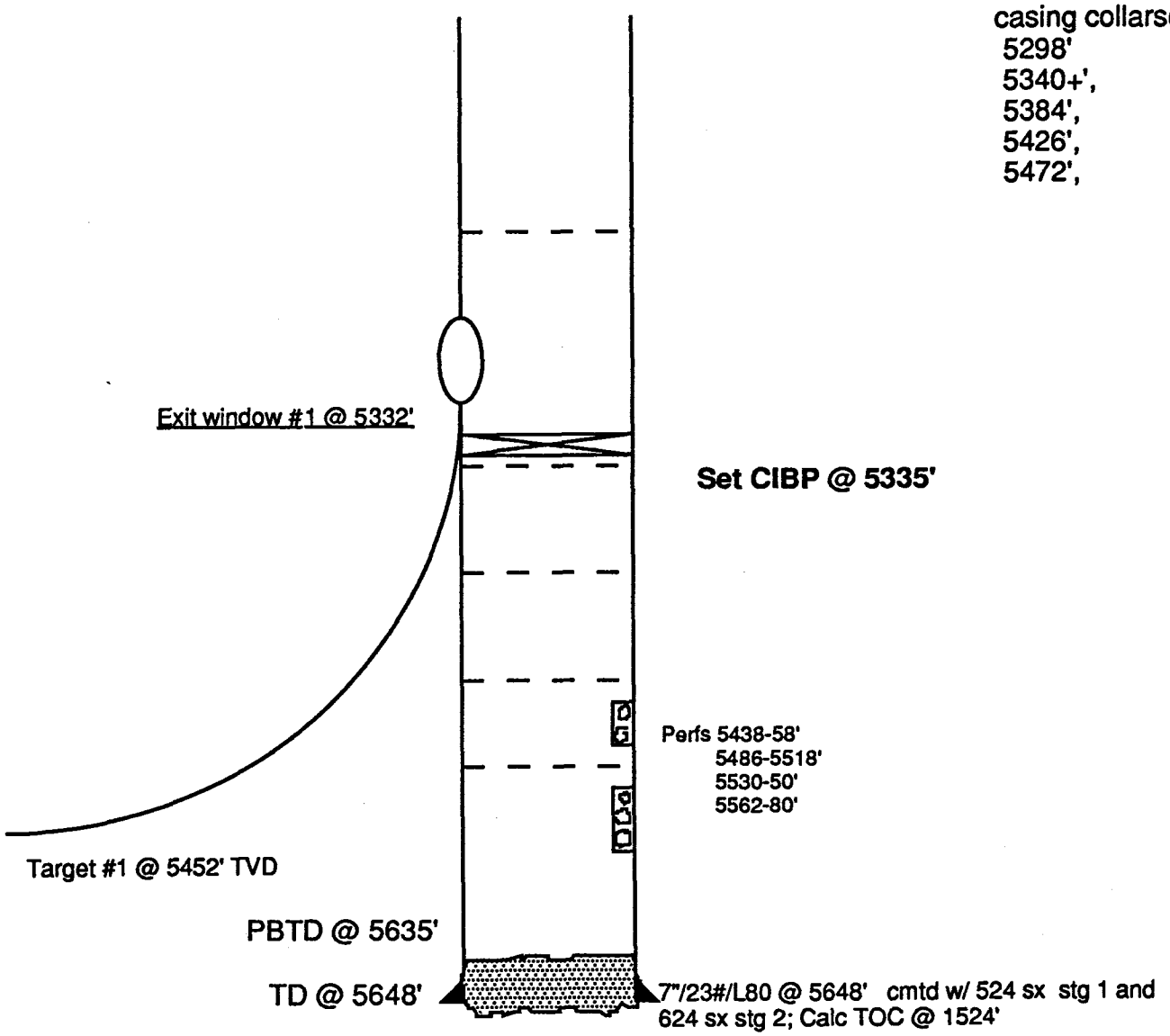
18. POH once curve is finished and PU lateral motor to drill the lateral using MWD.

19. Once lateral TD is reached, POH w/ directional equipment.

20. PU RTBP and set preparing for completion. RDMO.

Whipstock plan for Ratherford #21-24

Estimated
casing collars@
5298'
5340+',
5384',
5426',
5472',



Window	Btm-Top of window	Extension length	Curve radius	Bearing	Horiz Displ
1	5332-24'	-	120	315	3400

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 09/02/97

API NO. ASSIGNED: 43-037-31720

WELL NAME: RATHERFORD 21-24 MULTI-LEG
OPERATOR: MOBIL EXPL & PROD (N7370)

PROPOSED LOCATION:
SESW 21 - T41S - R24E
SURFACE: 0487-FSL-2064-FWL
BOTTOM: 2904-FSL-0263-FEL
SAN JUAN COUNTY
GREATER ANETH FIELD (365)

LEASE TYPE: IND
LEASE NUMBER: 14-20-603-355

PROPOSED PRODUCING FORMATION: DSCR

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Federal [✓] State [] Fee []
(Number UNKNOWN)
✓ Potash (Y/N)
✓ Oil shale (Y/N)
✓ Water permit
(Number NAVAJO ALLOTMENT)
✓ RDCC Review (Y/N)
(Date: _____)

LOCATION AND SITING:

✓ R649-2-3. Unit: RATHERFORD UNIT

___ R649-3-2. General.

___ R649-3-3. Exception.

___ Drilling Unit.
Board Cause no: _____
Date: _____

COMMENTS: _____

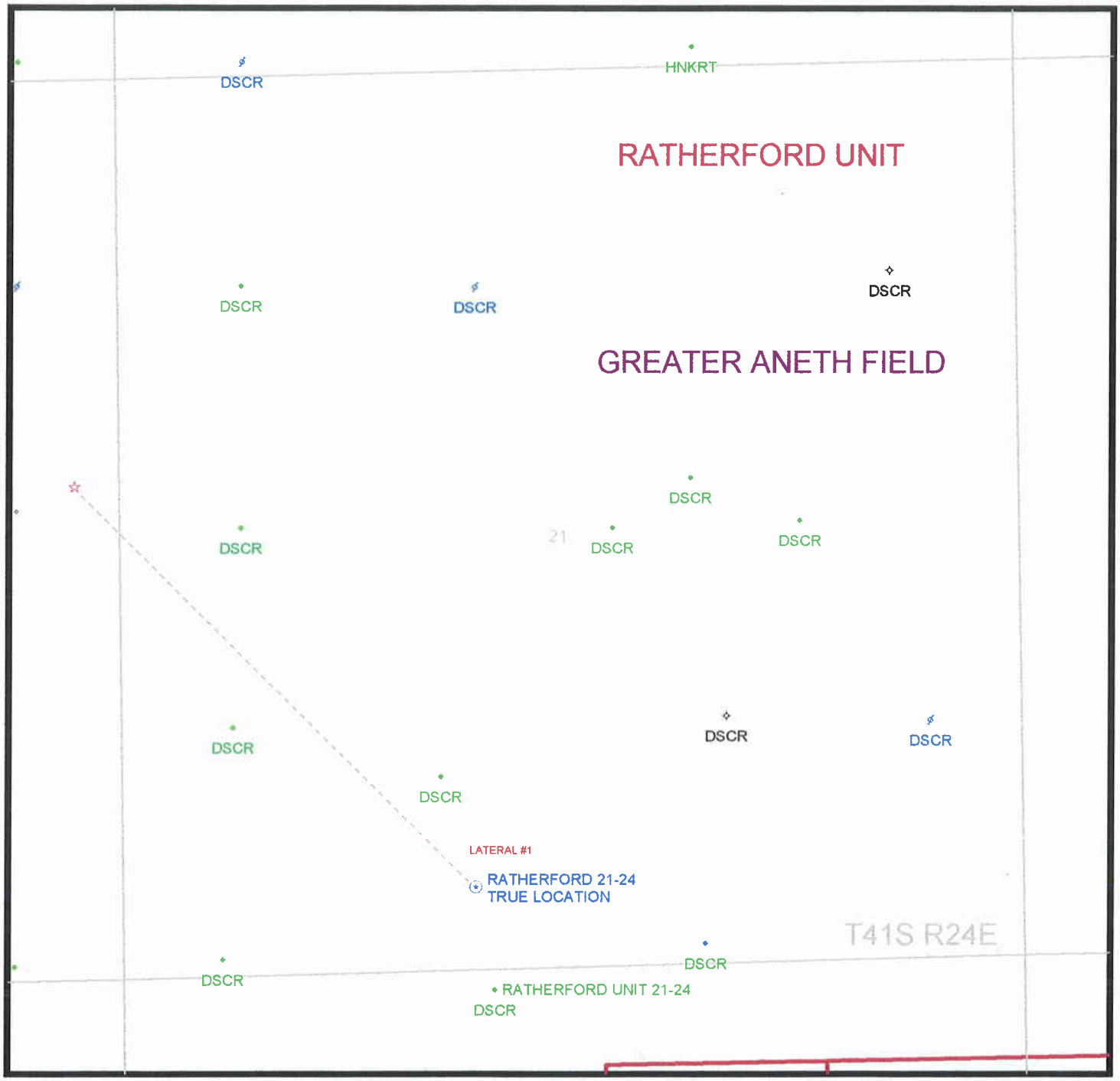
STIPULATIONS: 1- directional drilling

OPERATOR: MOBIL EXPL & PROD (N7370)

FIELD: GREATER ANETH (365)

SEC, TWP, RNG: SEC. 21, T41S, R24E

COUNTY: SAN JUAN UAC: R649-2-3 RATHERFORD



PREPARED:
DATE: 8-SEP-97

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

September 10, 1997

Mobil Exploration & Producing U.S., Inc.
P.O. Box 633
Midland, Texas 79702

Re: Ratherford 21-24 (Re-entry) Well, 487' FSL, 2064' FWL, SE SW, Sec. 21, T. 41 S., R. 24 E., San Juan County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to re-enter and drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-31720.

Sincerely,

John R. Baza
Associate Director

lwp
Enclosures
cc: San Juan County Assessor
Bureau of Land Management, Moab District Office

Operator: Mobil Exploration & Producing U.S., Inc.

Well Name & Number: Ratherford 21-24 (Re-entry)

API Number: 43-037-31720

Lease: 14-20-603-355

Location: SE SW **Sec.** 21 **T.** 41 S. **R.** 24 E.

Conditions of Approval

1. General
   Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements
   Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jim Thompson at (801)538-5336.

   Notify the Division prior to commencing operations to plug and abandon the well. Contact John R. Baza (801)538-5334.

3. Reporting Requirements
   All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. In accordance with Utah Admin. R. 649-3-11, Directional Drilling, submittal of a complete angular deviation and directional survey report is required.

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: MOBIL E & P

Well Name: RATHERFORD UNIT 21-24

Api No. 43-037-31720

Section: 21 Township: 41S Range: 24E County: SAN JUAN

Drilling Contractor: BIG "A"

Rig # 25

SPUDDED:

Date: 11/6/97

Time:

How: ROTARY

Drilling will commence:

Reported by: SIMON

Telephone NO.:

Date: 11/6/97 Signed: JLT

MOBIL

RATHERFORD UNIT #21-24
NW HORIZONTAL LATERAL LEG #1
1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 21, T41S, R24E
SAN JUAN, UTAH

GEOLOGY REPORT
by
DAVE MEADE / MARVIN ROANHORSE
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
GRAND JUNCTION, COLORADO
(970) 243-3044

TABLE OF CONTENTS

WELL SUMMARY

OPERATOR:	MOBIL EXPLORATION & PRODUCTION U.S. INC.
NAME:	RATHERFORD UNIT #21-44 SE HORIZONTAL LATERAL LEG #1 IN 1-A POROSITY BENCH, DESERT CREEK
LOCATION:	SECTION 21, T41S, R24E
COUNTY/STATE:	SAN JUAN, UTAH
ELEVATION:	KB: 4683' GL: 4670'
SPUD DATE:	11/06/97
COMPLETION DATE:	11/20/97
DRILLING ENGINEER:	BENNY BRIGGS
WELLSITE GEOLOGY:	MARVIN ROANHORSE/DAVE MEADE
MUDLOGGING ENGINEERS:	DAVE MEADE / MARVIN ROANHORSE/ERIC BRIDGEFORD
CONTRACTOR:	BIG "A" RIG 25
TOOLPUSHER:	J. DEES
HOLE SIZE:	4 3/4"
CASING RECORD:	KICK OFF POINT IN WINDOW AT 5325' MEASURED DEPTH
DRILLING MUD:	M-I
ENGINEER:	RONNIE WESTENBURG/DANNE BEASON
MUD TYPE:	FRESH WATER & BRINE WATER W/ POLYMER SWEEPS
DIRECTIONAL DRILLING CO:	SPERRY-SUN
ELECTICAL LOGGING:	NA
TOTAL DEPTH:	8077' MEASURED DEPTH; 5463.26' TVD
STATUS:	TOH TO WINDOW & KILL WELL PRIOR TO LAYING DOWN TOOLS - PREPARE FOR RIG MOVE

MOBIL

RATHERFORD UNIT #21-24
NW HORIZONTAL LATERAL LEG #1
1-A POROSITY BENCH
DESERT CREEK MEMBER
PARADOX FORMATION
SECTION 21, T41S, R24E
SAN JUAN, UTAH

GEOLOGY REPORT
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STATUS:	TOH TO WINDOW & KILL WELL PRIOR TO LAYING DOWN TOOLS - PREPARE FOR RIG MOVE

DRILLING CHRONOLOGY
RATHERFORD UNIT #21-24
1-A NW HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	ACTIVITY
11/06/97	5335'	0'	MOVE RIG & RIG UP
11/07/97	5335'	0'	RIG UP-SET BOP-PRES. TEST BOP & RAMS-PICK UP TUBING & COLLARS- PICK UP & STRAP AOH DP-TIH-DRLG CAST IRON BRIDGE PLUG-RIG UP CMTRS-PUMP CMT
11/08/97	5315'	3'	FILL BACK SIDE W/WATER-SQUEEZE CMT & DISPLACE-W O CMT- SQUEEZE CMT & DISPLACE-W O CMT-SQUEEZE TO 1800psi-PULL OUT OF CMT-REVERSE OUT-TOH-PICK UP WHIPSTOCK ASSEMBLY & ORIENT-CIR THRU DRL PIPE-RIG UP GYRO DATA & RUN GYRO-ORIENT & SET WHIPSTOCK-PULL GYRO & RIG DOWN GYRO DATA-MILL W/ STARTER MILL-5316'-5318'-CIR & PUMP BRINE WATER-TOH
11/09/97	5318'	16'	TOH-LAY DOWN STARTER MILL-P.U. WINDOW & WATERMELLON MILLS-TIH-MILL 7" CASING FROM 5316'-5325'-PUMP SWEEP & CIR OUT-TOH-L.D. MILLS-P.U. CURVE ASSEMBLY & BIT #1 (RR)-ORIENT & TEST MUD MOTOR & MWD-TIH-CIR-RIG UP GYRO DATA & RUN GYRO-TIME DRLG @ 2 MIN/IN 5325'-5329'-DIR DRLG & WIRELINE SURVEYS TO 5334'
11/10/97	5334'	191'	DIR DRLG & WIRELINE SURVEYS TO 5353'-CIR & PULL GYRO- RIG DOWN GYRO DATA-DIR DRLG CURVE & SURVEYS T0 5449'-UNABLE TO OBTAIN PROPER BUILD RATE IN CURVE-PUMP 8 BBL SWEEP & CIR OUT SMPLS-SPOT 10 BBL BRINE WATER-TOOH FOR MTR PAD ON BHA-CHANGE PAD,TIH-P.U. 2 JNTS AOH D.P. & SWIVEL,BREAK CIR-DIR DRLG TO 5525' TD OF CURVE-PUMP 10 BBL SWEEP,CIR OUT SMPLS & DISPLACE HOLE W/BRINE WATER-SHUT IN WELL
11/11/97	5525'	4'	SHUT IN WELL-PUMP 4100 STKS 14 # MUD,KILL WELL & CHECK FLOW-HANG SWIVEL,TOOH & L.D. 110 JNTS AOH-L.D. CURVE ASSEMBLY- P.U. & M.U. LATERAL ASSEMBLY/NB #2 - ORIENT & TEST BHA-TIH W/ LATERAL ASSEMBLY,P.U. 104 JNTS PH-6 & 6 DRLG COLLARS OFF RACKS-TIH-P.U. PH-6 & 3 D.C. OFF RACK-WORK PIPE THROUGH BRIDGE-CIR OUT AIRED UP MUD & ADD DEFOAMER TO SYSTEM
11/12/97	5529'	289'	CIR AIRED UP MUD & ADD DEFOAMER TO SYSTEM-DIR DRLG & SURVEYS TO 5534'- CIR AIRED UP MUD & TREAT SYSTEM-DIR DRLG & SURVEYS TO 5693'- CIR AIRED UP MUD & CONDITION MUD- DIR DRLG & SURVEYS TO 5818'-CIR & CONDITTION MUD,DISPLACE PIPE/30 BBL BRINE-SHUT IN WELL & MIX BAR FOR 15.5# MUD WEIGHT

DRILLING CHRONOLOGY
RATHERFORD UNIT #21-24
1-A NW HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	ACTIVITY
11/13/97	5818'	223'	SHUT IN WELL & COND MUD-MIX BAR FOR 15.5# MUD-DISPLACE HOLE W/15.5# MUD-PIPE STUCK-REDUCE HYDROSTATIC PRESS & FREE PIPE-CIR & COND MUD-PULL UP INTO CASING-CIR & COND MUD FOR 14.2# MUD WT-TIH-CIR-DIR DRLG & SURVEYS TO 6041'-FLOWING OIL-CIR & BUILD MUD WT-WELL SHUT IN-CIR & BUILD MUD WT TO 14.2 PPG
11/14/97	6041'	253'	WELL SHUT IN-CIR & BUILD MUD WT TO 13.2 PPG-INCR WT TO 14.2 PPG-DISPLACE HOLE W/14.2 PPG MUD-CIR-DIR DRLG & SURVEYS
11/15/97	6294'	588'	DIR. DRLG & SURVEYS
11/16/97	6882'	682'	DIR. DRLG & SURVEYS
11/17/97	7564'	110'	DIR. DRLG & SURVEYS-WELL BEGAN FLOWING @ 7627'-SHUT IN & CHECK PRESS @ CHOKE (250-200 psi)-CIR & BUILD MUD WT-WORK PIPE & OPEN HYDRILL-CHECK FOR FLOW-250-200 psi READ @ CHOKE-DIR. DRLG & SURVEYS TO 7674'-TOOH FOR NB#3-ORIENT & TEST MWD & MOTOR-TIH W/NB #3-TOOK GAS KICK-SHUT IN WELL & COND. MUD
11/18/97	7674'	107'	SHUT IN WELL & COND. MUD TO 15.3 WT-CIR 15.3 # MUD & DISPLACE THROUGH CHOKE-PUMP 12# MUD TO REDUCE HYDROSTATIC PRESSURE-DIR DRLG & SURVEYS-CIR. LOW WT SWEEP-WORK TITE HOLE-DIR DRLG & SURVEYS-REPAIR PUMP #1-DIR DLRG & SURVEYS
11/19/97	7781'	241'	DIR DRLG & SURVEYS TO 7817'-STUCK PIPE,CIR HIGH VIS LOW WT FLUID TO FREE- DIR DLRG & SURVEYS
11/20/97	8022'	55'	DIR DRLG & SURVEYS TO 8070'-STUCK PIPE,PUMP HIGH VIS LOW WT MUD TO FREE PIPE- DIR DLRG & SURVEYS TO TD OF 8077'(MD),5463.26 (TVD)-CIR SMPLS UP,PUMP 17ppg MUD SLUG 481 STRKS-TOH-PICK UP SWIVEL & PUMP OUT OF HOLE

DAILY ACTIVITY

Operator: MOBIL
Well Name: RATHERFORD UNIT #21-24 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPTH	DAILY	DATE	DEPTH	DAILY
11/06/97	5335'	0'			
11/07/97	5335'	0'			
11/08/97	5315'	3'			
11/09/97	5318'	16'			
11/10/97	5334'	191'			
11/11/97	5525'	4'			
11/12/97	5529'	289'			
11/13/97	5818'	223'			
11/14/97	6041'	253'			
11/15/97	6294'	588'			
11/16/97	6882'	680'			
11/17/97	7564'	110'			
11/18/97	7674'	107'			
11/19/97	7781'	241'			
11/20/97	8022'	55'			
TD	8077'				

BIT RECORD

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #21-24 NW 1-A HORIZONTAL LATERAL LEG #1

RUN	SIZE	MAKE	TYPE	IN/OUT	FTG	HRS	FT/HR
#1 RR	4 3/4"	HTC	STR-20	5325'/ 5525'	200'	15	13.3
#2	4 3/4"	HTC	STR-20	5525'/ 7674'	2,149'	76	28.3
#3	4 3/4"	STC	MF3P	7674'/ 8077'	403'	40	10.1

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : MOBIL (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/21-24,1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
5271.00	0.35	76.76	5270.72	27.11 S	0.22 W	-17.26	0.00
5316.00	0.35	76.76	5315.72	27.05 S	0.05 E	-17.42	0.00
5325.00	3.20	318.00	5324.71	26.86 S	0.09 W	-17.19	37.58
5335.00	6.50	313.78	5334.68	26.26 S	0.69 W	-16.35	33.17
5345.00	10.40	312.55	5344.57	25.25 S	1.76 W	-14.88	39.04
5355.00	14.60	311.97	5354.33	23.80 S	3.37 W	-12.72	42.02
5365.00	18.70	311.62	5363.91	21.89 S	5.50 W	-9.86	41.01
5375.00	22.80	311.39	5373.26	19.54 S	8.16 W	-6.31	41.01
5385.00	26.70	311.22	5382.34	16.78 S	11.30 W	-2.13	39.01
5395.00	30.80	311.10	5391.10	13.62 S	14.92 W	2.68	41.00
5405.00	35.00	309.70	5399.50	10.10 S	19.06 W	8.11	42.68
5415.00	39.20	308.50	5407.47	6.30 S	23.74 W	14.14	42.62
5425.00	43.60	307.20	5414.97	2.25 S	28.96 W	20.74	44.83
5435.00	47.70	307.00	5421.96	2.07 N	34.67 W	27.88	41.02
5445.00	51.40	306.60	5428.44	6.62 N	40.76 W	35.48	37.12
5455.00	56.50	305.70	5434.33	11.39 N	47.29 W	43.54	51.52
5465.00	62.60	305.20	5439.39	16.39 N	54.31 W	52.13	61.15
5475.00	68.50	304.90	5443.53	21.61 N	61.76 W	61.20	59.06
5485.00	73.90	306.60	5446.75	27.14 N	69.43 W	70.64	56.34
5495.00	79.10	309.60	5449.09	33.14 N	77.08 W	80.35	59.62
5525.00	92.10	314.40	5451.38	53.12 N	99.25 W	110.17	46.16
5563.79	91.10	311.90	5450.30	79.63 N	127.53 W	148.88	6.94
5595.53	89.30	313.90	5450.19	101.23 N	150.78 W	180.58	8.48
5627.36	89.00	313.10	5450.66	123.14 N	173.87 W	212.35	2.68
5659.19	89.00	313.00	5451.22	144.87 N	197.13 W	244.13	0.31
5690.99	89.00	312.80	5451.77	166.51 N	220.42 W	275.88	0.63
5722.05	89.60	313.10	5452.15	187.67 N	243.15 W	306.90	2.16
5753.78	90.10	312.60	5452.24	209.25 N	266.41 W	338.59	2.23
5784.75	90.80	313.00	5451.99	230.29 N	289.13 W	369.52	2.60
5816.62	92.30	313.30	5451.13	252.08 N	312.38 W	401.33	4.80
5848.45	92.70	313.90	5449.74	274.01 N	335.40 W	433.07	2.26
5880.21	91.60	314.00	5448.55	296.04 N	358.25 W	464.73	3.48
5911.98	89.40	312.60	5448.27	317.82 N	381.37 W	496.44	8.21
5943.62	87.00	310.20	5449.27	338.73 N	405.09 W	528.05	10.72
5975.52	86.80	308.90	5450.99	359.02 N	429.65 W	559.90	4.12
6007.27	86.50	308.80	5452.85	378.90 N	454.33 W	591.59	1.00
6039.04	87.10	307.00	5454.62	398.38 N	479.36 W	623.29	5.96
6070.79	88.20	306.10	5455.92	417.27 N	504.85 W	654.95	4.47

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : MOBIL (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/21-24,1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
6102.55	88.90	305.80	5456.73	435.91 N	530.55 W	686.62	2.40
6134.38	89.20	306.60	5457.26	454.71 N	556.23 W	718.38	2.68
6166.23	89.70	307.00	5457.56	473.79 N	581.73 W	750.18	2.01
6198.09	89.80	307.50	5457.70	493.07 N	607.09 W	782.00	1.60
6229.84	89.60	307.90	5457.87	512.49 N	632.21 W	813.73	1.41
6261.60	89.10	307.00	5458.23	531.80 N	657.43 W	845.45	3.24
6293.37	88.40	305.90	5458.92	550.67 N	682.98 W	877.15	4.10
6324.37	88.10	305.40	5459.87	568.73 N	708.15 W	908.05	1.88
6356.09	87.80	305.90	5461.00	587.20 N	733.91 W	939.66	1.84
6387.98	88.30	305.20	5462.09	605.73 N	759.84 W	971.43	2.70
6419.75	89.70	305.60	5462.64	624.13 N	785.74 W	1003.09	4.58
6451.64	90.10	305.90	5462.70	642.77 N	811.62 W	1034.90	1.57
6483.39	90.70	306.30	5462.47	661.47 N	837.27 W	1066.57	2.27
6514.99	91.20	307.00	5461.95	680.33 N	862.62 W	1098.11	2.72
6546.81	90.80	307.70	5461.40	699.63 N	887.91 W	1129.89	2.53
6578.60	90.80	308.60	5460.95	719.27 N	912.91 W	1161.66	2.83
6610.32	89.50	308.60	5460.87	739.06 N	937.69 W	1193.37	4.10
6642.07	90.20	308.80	5460.95	758.91 N	962.47 W	1225.11	2.29
6673.87	90.40	308.80	5460.79	778.83 N	987.26 W	1256.91	0.63
6705.63	90.60	308.20	5460.51	798.60 N	1012.11 W	1288.65	1.99
6737.45	90.60	307.70	5460.17	818.17 N	1037.20 W	1320.45	1.57
6769.18	89.80	307.00	5460.06	837.42 N	1062.42 W	1352.15	3.35
6800.91	90.10	306.60	5460.09	856.43 N	1087.83 W	1383.83	1.58
6832.76	89.30	306.60	5460.26	875.42 N	1113.40 W	1415.62	2.51
6864.53	88.70	306.10	5460.81	894.25 N	1138.98 W	1447.32	2.46
6896.39	88.90	305.60	5461.48	912.90 N	1164.80 W	1479.09	1.69
6928.22	88.90	306.80	5462.09	931.70 N	1190.48 W	1510.85	3.77
6960.07	88.30	306.80	5462.87	950.77 N	1215.98 W	1542.64	1.88
6991.84	87.90	306.80	5463.92	969.79 N	1241.40 W	1574.34	1.26
7023.55	89.20	307.30	5464.73	988.89 N	1266.70 W	1606.00	4.39
7055.42	89.80	308.80	5465.00	1008.53 N	1291.80 W	1637.85	5.07
7087.13	90.00	309.10	5465.06	1028.46 N	1316.46 W	1669.55	1.14
7118.98	89.40	309.60	5465.23	1048.66 N	1341.09 W	1701.40	2.45
7150.06	90.30	310.20	5465.31	1068.59 N	1364.93 W	1732.48	3.48
7181.93	90.40	310.70	5465.11	1089.27 N	1389.18 W	1764.35	1.60
7213.72	90.40	311.20	5464.89	1110.11 N	1413.19 W	1796.13	1.57
7245.58	90.20	311.60	5464.72	1131.17 N	1437.09 W	1827.98	1.40
7276.54	89.80	311.20	5464.72	1151.65 N	1460.31 W	1858.93	1.83

SPERRY-SUN DRILLING SERVICES
SURVEY DATA

Customer ... : MOBIL (UTAH)
Platform ... : RATHERFORD UNIT
Slot/Well .. : BA25/21-24,1A1

MEASURED DEPTH	ANGLE DEG	DIRECTION DEG	TVD	NORTHINGS FEET	EASTINGS FEET	VERTICAL SECTION	DOG LEG
7308.39	89.00	310.70	5465.06	1172.52 N	1484.37 W	1890.77	2.96
7340.25	89.30	308.90	5465.53	1192.91 N	1508.84 W	1922.63	5.73
7372.07	90.50	308.40	5465.59	1212.79 N	1533.69 W	1954.44	4.09
7403.70	89.50	307.70	5465.59	1232.28 N	1558.60 W	1986.05	3.86
7435.58	88.90	305.90	5466.03	1251.38 N	1584.12 W	2017.88	5.95
7467.32	91.10	306.30	5466.03	1270.07 N	1609.77 W	2049.54	7.04
7499.13	90.30	305.80	5465.64	1288.79 N	1635.48 W	2081.27	2.97
7530.88	89.60	305.20	5465.67	1307.23 N	1661.33 W	2112.92	2.90
7562.75	89.90	305.60	5465.81	1325.69 N	1687.31 W	2144.69	1.57
7594.45	91.40	307.50	5465.45	1344.57 N	1712.77 W	2176.33	7.64
7626.30	92.10	306.50	5464.48	1363.73 N	1738.19 W	2208.12	3.83
7657.00	93.50	304.10	5462.98	1381.44 N	1763.22 W	2238.68	9.04
7688.76	91.70	304.60	5461.54	1399.34 N	1789.41 W	2270.25	5.88
7720.61	91.60	305.70	5460.62	1417.67 N	1815.44 W	2301.97	3.47
7752.53	90.40	306.10	5460.06	1436.39 N	1841.29 W	2333.80	3.96
7783.50	87.90	305.40	5460.52	1454.48 N	1866.42 W	2364.68	8.38
7815.32	88.90	305.90	5461.41	1473.02 N	1892.27 W	2396.40	3.51
7847.13	90.30	308.20	5461.63	1492.18 N	1917.65 W	2428.16	8.46
7878.89	90.40	310.20	5461.44	1512.25 N	1942.26 W	2459.92	6.30
7910.64	88.80	310.30	5461.66	1532.77 N	1966.50 W	2491.67	5.05
7941.55	90.50	311.70	5461.85	1553.04 N	1989.82 W	2522.57	7.12
7973.28	88.90	311.90	5462.02	1574.19 N	2013.47 W	2554.28	5.08
8005.06	89.70	313.70	5462.40	1595.78 N	2036.79 W	2586.02	6.20
8036.00	90.20	314.90	5462.43	1617.39 N	2058.93 W	2616.87	4.20
8043.00	89.30	315.10	5462.46	1622.34 N	2063.88 W	2623.84	13.17
8077.00	88.00	315.10	5463.26	1646.41 N	2087.87 W	2657.70	3.82

THE DOGLEG SEVERITY IS IN DEGREES PER 100.00 FEET.
N/E COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
TVD COORDINATE VALUES GIVEN RELATIVE TO WELL HEAD.
THE VERTICAL SECTION ORIGIN IS WELL HEAD.
THE VERTICAL SECTION WAS COMPUTED ALONG 310.00 (TRUE).
CALCULATION METHOD: MINIMUM CURVATURE.

5271-GYRO, 5315 STRAIGHT LINE EXTRAPOLATION
5325-5385 INTERPOLATED, 5395-5475 MAG. INTERFERENCE
8077 PROJECTED TO THE BIT

MUD REPORT

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #21-24 NW 1-A HORIZONTAL LATERAL LEG #1

DATE	DEPTH	WT	VIS	PLS	YLD	GEL	pH	WL	CK	CHL	CA	SD	OIL	WTR
11/07/97	5335'	8.4	26	–	–	–	8.0	N/C	–	4200	600	–	0%	100%
11/08/97	5335'	8.4	26	–	–	–	8.0	N/C	–	4200	600	–	0%	100%
11/09/97	5318'	8.4	26	–	–	–	9.0	N/C	–	4500	880	–	0%	100%
11/10/97	5410'	8.4	26	–	–	–	11.5	N/C	–	4500	840	–	0%	100%
11/11/97	5525'	8.51	26	–	–	–	11.6	N/C	–	240K	480	–	0%	100%
	5525'	10.0	26	–	–	–	7.6	N/C	–	180K	680	–	0%	100%
11/12/97	5818'	15.5	48	–	–	–	8.5	N/C	1/32	160K	825	–	12%	88%
11/13/97	5818'	14.2	49	18	16	4/6	8.2	9.0	2/32	90K	600	23%	12%	65%
11/14/97	6042'	14.5	52	23	18	5/7	8.2	6.2	1/32	86K	680	25%	12%	63%
11/15/97	6676'	14.4	46	20	18	5/7	8.2	18	1/32	85 K	600	NR	13%	NR
11/16/97	7080'	14.6	53	26	19	5/7	8.2	6.2	1/32	84.5 K	640	27%	14%	59%
11/17/97	7626'	14.6	53	26	19	5/7	8.3	7.9	1/32	83K	640	27%	14%	59%
11/18/97	7708'	14.7	50	24	17	5/7	8.2	7/9	1/32	60K	800	27%	15%	58%
11/19/97	7887'	14.6	52	30	20	7/10	8.2	7.9	2/32	56K	760	25%	15%	60%
11/20/97	NO	CHECK REPORTED												

SAMPLE DESCRIPTIONS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #21-24 NW 1-A HORIZONTAL LATERAL LEG #1

DEPTH	LITHOLOGY

5325.00 5330.00 "LS wh-crm-ltbrn,crpxl,cln-dns,occ arg,v sl dol,anhy ip-tr ANHY incl,tt,NFSOC w/tr ltgy CMT frag"

5330.00 5340.00 "LS wh-crm-ltbrn,crpxl,cln-dns,occ arg-chky ls,v sl dol,anhy ip-tr ANHY incl,tt,NFSOC w/tr ltgy CMT frag"

5340.00 5350.00 "LS tan-ltgybrn,crm,occ wh,mbrngy,crpxl,sl micxl,scat tan-ltgybrn CHT frag,pred dns/occ chky strk,sl anhy,v sl arg,tt,NFSOC"

5350.00 5360.00 "LS tan,ltgybrn-wh-ltgy,occ brn,crpxl-tr micxl,scat gy-gybrn-occ brn CHT frag,dns/incr chky prtgs,sl anhy/rr xln ANHY incl,sl arg,v sl DOL,tt,NFSOC"

5360.00 5370.00 "LS tan-ltgybrn-ltgy,occ wh,brn,dkbrnblk,crpxl-tr micxl,scat gy-brn-dkbrn CHT,dns/occ chky prtgs,sl anhy/vrr xln ANHY incl,sl arg,occ DOL & shy strk,tt,NFSOC"

5370.00 5380.00 "LS ltgybrn-ltgy,tan,brn,occ wh,dkbrnblk,crpxl,occ micxl,dns/occ chky prtgs,scat CHT AA,sl anhy/vrr xln ANHY incl,occ grdg to sl arg sl dol-calc SH,tt,NFSOC"

5380.00 5390.00 "SH blk,frm-mhd,rthy-sl slty,calc-sl dol,carb/LS AA,rr calc xl,tt,NFSOC "

5390.00 5400.00 "LS lt-mgybrn,ltbrn-tan,occ brn,wh,dkbrnblk,crpxl-micxl,rthy-sl slty,tr chky prtgs,scat CHT AA,anhy/vrr xln ANHY incl,occ dns,tt-rr intxl POR/chky-anhy fl,NFSOC"

5400.00 5410.00 "LS AA,crpxl-micxl,rthy-slty,occ sl shy,tr chky prtgs,scat CHT AA,anhy/rr xln ANHY incl,occ dns,v sl arg ip,tt-vrr intxl POR/chky-anhy fl,NFSOC"

5410.00 5420.00 "LS AA/bcmg incr shy-grdg to calc arg SH ip,incr scat trnsl-wh xl ANHY frag,dns,tt,NFSOC/scat-intbd SH frag-lam AA "

5420.00 5430.00 "SLST ltgy-gybrn,frm-mfrm,rthy,calc-lmy,occ grdg to slty LS"

5430.00 5440.00 "LS lt-mgybrn,ltbrn,occ tan,brn,wh,dkbrn,crpxl-micxl,rthy,sl slty-shy,chky,rr CHT AA,anhy/tr scat xln ANHY,occ dns,tt-tr intxl POR/chky-anhy fl,fr-tr dull-mod bri yel FLOR,n-sl tr ltbrn STN,fr slow stmg CUT"

5440.00 5450.00 "SH blk-dkbrnblk,sbblky-plty-sbplty,sft-frm-occ brit,sl calc,sooty"

5449.00 5460.00 "SH blk-dkbrnblk,sbblky-plty-sbplty,sft-frm-occ brit,sl calc,sooty,vrr pyrite,occ any flngs"

5460.00 5470.00 "LS lt-mgybn,crpxl-micxl,rthy-chky ip,occ foss,tr chky prtgs,occ calc xtls,rr anhy,occ dns,v sl arg ip,pos intxl POR,NFSOC"

5480.00 5490.00 "LS l-mgybn,crpxl-micxl,rthy-slty,occ foss,tr chky prtgs,occ calc xtls,rr anhy,occ dns,v sl arg ip,pos intxl POR,NFSOC"

DEPTH	LITHOLOGY

5490.00 5500.00 "LS grdg to LS GRNST,lt-mgybn,crpxl-micxl,rthy-slty,mod oomld/oocst text w/sme calc fld csts,occ foss,rr calc xtls,rr anhy,pos intxl POR,mod oomld POR,mod ylgld FLOR,sme ltbn spty STN,gd strng CUT"

5500.00 5510.00 "LS lt-mgybn,mic-vfxtln,rthy-slty,mod oomld/oocst text w/sme xtln calc fld csts,occ foss,rr anhy,pos intxl POR,mod oomld POR,abnt ylgld FLOR,sme ltbn spty STN,gd strng CUT"

5510.00 5525.00 "LS lt-mbrn,ltgybrn,occ brn-dkbrn,ltgy-wh,micxl-gran,crpxl,occ vfxl,pred ooc-oom-sl ool GRNST/scat dns PCKST frag-rr incl,sl chky/tr scat prtgs-occ incl & POR fl,sl anhy/tr xl ANHY incl,occ sl dol,g ooc-oom/tr intxl POR,g mod bri/scat bri yel FLOR,fr-g ltbrn-brn/occ dkbrn-blk STN,g fast dif/tr mod fast stmg mlky CUT "

5525.00 5550.00 "LS ltbrn-lt-mgybrn,occ tan,crm-wh,brn,gran-micxl-vfxl,occ crpxl,ooc-oom GRNST,tr scat-intbd dns PCKST,chky-occ strk-incl/tr POR fl,anhy/scat xln ANHY frag,g oom-ooc-intxk/tr pp vug POR,g mod bri-bri yel FLOR,g mod fast-fast stmg-blooming mlky CUT"

5550.00 5560.00 "LS AA,decr anhy & xl ANHY frag,POR-FLOR-STN-CUT AA"

5560.00 5580.00 "LS ltbrn,lt-mgybrn,occ tan,crm-wh,brn,gran-vfxl-micxl,occ crpxl,ooc-oom GRNST,tr PCKST AA,chky-occ strk-incl/tr POR fl,anhy/incr scat xln ANHY frag,g oom-ooc-intx/tr pp vug POR,g even mod bri-bri yel FLOR,CUT AA"

5580.00 5590.00 "LS ltbrn-ltbrngy,tan,occ wh-crm strk-incl,m-dkbrn,gran-vfxl-micxl,occ crpxl,ooc-oom-sl ool GRNST,tr scat-intbd dns PCKST,chky-anhy/decr xl ANHY,g ooc-oom-intxl-tr pp vug POR/tr anhy-chky fl,FLOR AA,g-fr ltbrn-occ brn STN/tr dkbrn-blk STN,g mod fast CUT"

5590.00 5610.00 "LS m-ltbrn,ltgybrn-ltgy,occ brn,mgybrn,wh,GRNST AA/incr scat dns sl shy-tr chky plty PCKST,anhy/tr xl ANHY,tr scat blk-dkbrn SH & brn-trnsl CHT frag-prob cvgs,fr POR AA,tr scat mod bri/spty bri yel FLOR,fr ltbrn/tr brn-rr blk STN,g-fr slow stmg mlky CUT "

5610.00 5630.00 "LS ltbrn,occ brn,ltbrngy,tr tan,wh-crm,dkbrn,gran-vfxl-micxl,occ crpxl,ooc-oom-sl ool GRNST,tr scat PCKST AA,chky-anhy/rr xl ANHY,g ooc-oom-intxl-tr pp vug POR/tr fl,g even mod bri-bri yel FLOR,g-fr ltbrn-occ brn/tr dkbrn-blk STN,g mod fast-slow stmg CUT"

5630.00 5650.00 "LS AA,pred ooc-oom-sl ool GRNST,/tr-rr scat-occ intbd dns PCKST,chky-anhy,rr-tr xln ANHY frag-incl/tr POR fl,g ooc-oom-intxl/rr pp vug POR,g even mod bri-bri yel FLOR,g-fr ltbrn-brn-tr scat blk STN,g fast-mod fast stmg mlky CUT "

5650.00 5670.00 "LS ltbrn,occ brn,ltbrngy,tr tan,wh-crm,dkbrn,gran-vfxl-micxl,occ crpxl,GRNST AA,sl incr scat PCKST AA,chky-anhy/rr xl ANHY,g ooc-oom-intxl-tr pp vug POR/tr fl,g even mod bri-bri yel FLOR,g-fr ltbrn-occ brn/tr dkbrn-blk STN,g mod fast-slow stmg CUT"

5670.00 5690.00 "LS AA,ooc-oom-sl ool GRNST/decr scat-intbd dns PCKST,chky-anhy/rr xln ANHY frag & plty frag,v sl dol/tr DOL rich cmt,POR & FLOR AA,g-fr ltbrn/tr brn & incr scat blk STN,g mod fast-fast stmg mlky CUT"

5690.00 5720.00 "LS ltbrn-tan-ltgybrn/occ wh-crm incl-strk,occ brn,gran-vfxl-micxl,occ crpxl,GRNST AA/tr scat-intbd PCKST AA,chky-anhy/rr xl ANHY,g ooc-oom-intxl POR/tr fl,g even mod bri-bri yel FLOR,g-fr ltbrn-brn/scat blk STN,g mod fast-slow stmg CUT"

5720.00 5740.00 "LS ltbrn-tan,occ brn,ltbrngy,occ wh-crm incl-strk,gran-vfxl-micxl,occ crpxl,ooc-oom GRNST,tr intbd-scat PCKST AA,chky-anhy/rr xl ANHY,g ooc-oom-intxl POR/tr fl,g even mod bri-bri yel FLOR,g ltbrn-brn/tr dkbrn-blk STN,g mod fast-slow stmg CUT"

DEPTH	LITHOLOGY

5740.00 5760.00 "LS AA,ooc-oom-sl ool GRNST/decr scat-intbd dns PCKST,chky-anhy/rr xln ANHY frag & plty frag,v sl dol,g ooc-oom-intxl POR/tr anhy-chky POR fl,g even mod bri-bri yel FLOR,g-fr ltbrn/tr brn & incr scat blk STN,g mod fast-fast stmg mlky CUT"

5760.00 5780.00 "LS ltbrn-brn,ltgybrn,occ tan,crm-wh incl-strk,gran-micxl-vfxl,occ crpxl,ooc-oom-sl ool GRNST,tr scat-intbd dns PCKST,chky-anhy/tr POR fl,vrr xl ANHY frag,g ooc-oom-intxl POR,g even bri-mod bri yel FLOR,STN & CUT AA"

5780.00 5800.00 "LS AA,ooc-oom-sl ool GRNST,tr-rr scat-intbd dns PCKST,chky-anhy/tr POR fl,vrr xl ANHY frag,POR-FLOR-STN-CUT AA"

5818.00 5830.00 "LS ltbrn-tan,occ ltgybrn,brn,crm-wh incl-strk,gran-vfxl-micxl,occ crpxl,GRNST AA,tr PCKST AA,chky-anhy/tr POR fl,scat xl ANHY frag,POR-FLOR AA,g ltbrn-brn/tr blk STN,g blooming-fast stng mlky CUT"

5830.00 5850.00 "LS AA,ooc-oom-sl ool GRNST,tr scat-intbd dns PCKST,chky-anhy/rr xl ANHY,g ooc-oom-intxl POR/tr fl,FLOR-STN AA,gslow blooming-fast stmg mlky CUT"

5850.00 5870.00 "LS ltbrn-brn,ltgybrn,occ tan,crm-wh incl-strk,gran-micxl-vfxl,occ crpxl,ooc-oom-sl ool GRNST,tr scat-intbd dns PCKST,chky-anhy/tr POR fl,vrr xl ANHY frag,g ooc-oom-intxl POR,g even bri-mod bri yel FLOR,STN & CUT AA"

5870.00 5900.00 "LS brn-ltbrn,occ tan,ltgybrm,tr wh-crn strk-incl,vfxl-gran-micxl,occ crpxl,ooc-oom-sl ool GRNST/tr intbd-scat dns PCKST,chky-anhy/tr xl ANHY incl,vrr chky plty prtgs,v sl dol,g oom-ooc/tr intxl-rr pp vug POR,g even bri-mod bri yel FLOR,g brn-ltbrn/scat blk dd o STN,g blooming-fast stmg mlky CUT"

5900.00 5920.00 "LS brn-ltbrn,occ tan,micxl-vfxl,gran-suc,ooc-oom GRNST/v rr scat dns sl ool PCKST,chky ip,sl anhy-ANHY incl-xl,v sl dol,v rr trnsl CHT frag,g ool-intxl POR,g even bri-mod bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT "

5920.00 5940.00 "LS AA,sl incr wh-crm chk PKST,tr trnsl CHT frag,v sl alg,g ool-intxl-tr vug POR,g even bri-mod bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT "

5940.00 5960.00 "LS brn-ltbrn,occ tan-ltgybrn,micxl-vfxl,gran-suc,ooc-oom GRNST,v sl alg,rr scat sl ool-anhy PCKST,anhy-tr ANHY incl-xl,v sl dol,v rr trnsl CHT frag,g ool-intxl-rr vug POR,g bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT "

5960.00 5980.00 "LS AA,sl incr wh-crm-tan ool-chk sl anhy dns PKST,sl incr ANHY fl POR,POR-FLOR-STN-CUT AA"

5980.00 6000.00 "LS brn-ltbrn,occ tan-ltgybrn,micxl-vfxl,gran-suc,ooc-oom GRNST,alg ip,incr wh-crm sl ool-anhy PCKST,anhy-tr ANHY incl-xl,sl dol,rr trnsl-clr CHT frag,g ool-intxl-rr vug POR,g bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT "

6000.00 6020.00 "LS AA,incr wh-crm-tan,occ ool,chk,sl anhy-tr ANHY incl,dns PKST,incr ANHY fl POR,sl decr POR-FLOR,STN-CUT AA"

6020.00 6040.00 "LS AA,incr ooc-oom mat,scat alg mat,scat ANHY fl POR,tr-fr ool-intxl-tr vug POR,tr-fr dull-bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast stmg CUT"

6040.00 6050.00 "LS AA,w/POR-FLOR-STN-CUT AA & ABNT CALCIUM CARBONATE FRAG IN SPLS"

DEPTH	LITHOLOGY

6050.00 6070.00 "LS brn-ltbrn,occ tan-ltgybrn,crpxl-vfxl,gran-suc,ooc-oom GRNST,alg ip,tr wh-crm-tan sl ool-anhy PCKST,anhy-tr ANHY incl-xl,sl dol,rr trnsl-clr CHT frag,fr-g ool-intxl-rr vug POR,g bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,tr-fr mod fast stmg CUT "

6070.00 6090.00 "ABNT CACO3 FRAG IN SPL
LS tan-brn-gybrn,crpxl-vfxl,gran-suc,pred ooc-oom GRNST,scat crm-wh-tan ool-v anhy PKST frag-incl,dol-occ DOL rich cmt,anhy-ANHY incl-POR FL,v sl alg,v rr trnsl CHT frag,fr-g ool-intxl-rr alg POR,fr-g bri yel FLOR,fr-g brn-tr blk STN,fr-g mod fast CUT"

6090.00 6100.00 "ABNT CACO3 FRAG IN SPL
LS AA,POR-FLOR-STN-CUT AA"

6100.00 6120.00 "LS AA,w/POR-FLOR-STN-CUT AA & SL DECR CALCIUM CARBONATE FRAG IN SPLS"

6120.00 6140.00 "SPL PRED CACO3 FRAG
LS tan-brn-gybrn,crpxl-vfxl,gran-micsuc,pred ooc-oom GRNST,scat crm-wh-tan ool-v anhy PKST frag-incl,dol-occ DOL rich cmt,anhy-ANHY incl-POR fl,v sl alg,v rr trnsl CHT frag,fr-g ool-intxl-rr alg POR,fr-g bri yel FLOR,fr-g brn-tr blk STN,fr-g mod fast CUT"

6140.00 6160.00 "LS ltbrn-brn,occ dkbrn-gybrn,AA,w/occ tan-crm crpxl sl anhy occ ool PKST,rr-tr ANHY incl-POR fl,n-v rr trnsl CHT frag,fr-g POR-FLOR-STN-CUT & DECR CALCIUM CARBONATE FRAG IN SPLS"

6160.00 6180.00 "LS AA,w/POR-FLOR-STN-CUT AA & tr CALCIUM CARBONATE FRAG IN SPLS"

6180.00 6200.00 "LS tan-brn-gybrn,micxl-vfxl,gran-micsuc,pred ooc-oom GRNST,scat crm-wh-tan ool-sl anhy occ fos PKST frag-incl,dol-occ DOL rich cmt,anhy-ANHY incl-POR fl,sl alg,v rr trnsl CHT frag,fr-g ool-intxl-rr alg POR,fr-g bri yel FLOR,fr brn-tr blk STN,g fast CUT"

6200.00 6230.00 "INCR CACO3 FRAG IN SPLS
LS AA,sl incr sl ool-fos anhy chky PKST,POR-FLOR-STN-CUT AA"

6230.00 6260.00 "INCR CACO3 FRAG IN SPLS
LS tan-brn-gybrn,micxl-vfxl,gran-micsuc,pred ooc-oom GRNST,scat crm-wh-tan ool-sl anhy occ fos PKST frag-incl,dol-occ DOL rich cmt,anhy-ANHY incl-POR fl,sl alg,v rr trnsl CHT frag,fr-g ool-intxl-rr alg POR,fr-g bri yel FLOR,fr brn-tr blk STN,g fast CUT"

6260.00 6280.00 "ABNT CACO3 FRAG IN SPL
LS AA,incr crpxl tan-crm-offwh sl ool anhy chk ip PKST,scat ANHY xl-incl-occ POR fl,v rr trnsl-bf CHT frag,fr-g intxl-fr ool-rr alg POR,tr of fr-g bri yel FLOR,fr-g lt-dkbrn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"

6280.00 6300.00 "LS AA,POR-FLOR-STN-CUT AA,W/ABNT CACO3 FRAG IN SPL"

6300.00 6330.00 "DECR CACO3 FRAG IN SPL
LS tan-brn-gybrn,micxl-vfxl,gran-micsuc,pred ooc-oom GRNST,rr crm-wh-tan ool-sl anhy occ fos PKST frag-incl,dol-occ DOL rich cmt,anhy-ANHY incl-POR fl,sl alg,v rr trnsl CHT frag,fr-g ool-intxl-rr alg POR,fr-g bri yel FLOR,fr brn-tr blk STN,g fast CUT"

6330.00 6340.00 "LS AA,fr-g ool-intxl-v rr vug POR,fr-g bri yel FLOR,fr-g brn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT, W/SIGNIFICANT DECREASE IN CACO3 IN SPLS"

DEPTH	LITHOLOGY

6340.00 6360.00 "INCR CACO3 FRAG IN SPLS
LS ltbrn-tan,occ brn,gybrn,micxl-vfxl-gran,micsuc,ooc-oom GRNST,vrr PKST frag-incl,sl dol/rr DOL rich cmt strk,chky-anhy/ANHY incl-POR fl,sl alg,v rr trnsl CHT frag,g ool-intxl-sl oom/rr alg POR,g even mod bri-bri yel FLOR,fr-g brn/tr blk STN,g fast CUT"

6360.00 6380.00 "LS AA,bcmg gran-micsuc-suc,micxl,ooc-oom GRNST,rr scat-occ intbd dns PCKST,chky-anhy/tr scat-intbd xl ANHY,POR-FLOR-STN AA,g fast-slow blooming mlky CUT"

6380.00 6390.00 "LS AA,ooc-oom GRNST,rr intbd-scat dns PCKST,chky-anhy/tr xl ANHY frag-incl,POR-FLOR-STN AA,g mod fast-slow stmg mlky CUT"

6390.00 6400.00 6391.69 0 "DECR CACO3 FRAG IN SPL
LS AA,POR-FLOR-STN,g mod fast-slow stmg mlky CUT"

6400.00 6410.00 "LS ltbrn-tan,occ brn,gybrn,micxl-vfxl-gran,micsuc,ooc-oom GRNST,vrr PKST frag-incl,sl dol/tr DOL rich cmt strk,chky-anhy/ANHY incl-POR fl,sl alg,POR-FLOR-STN,CUT AA"

6410.00 6420.00 "LS AA,POR-FLOR-STN,g mod fast-slow stmg mlky CUT"

6420.00 6450.00 "INCR CACO3 FRAG IN SPLS
LS ltbrn-tan,occ brn,gybrn,micxl-vfxl-gran,micsuc,ooc-oom GRNST,vrr PKST frag-incl,sl dol/rr DOL rich cmt strk,chky-anhy/ANHY incl-POR fl,sl alg,v rr trnsl CHT frag,g ool-intxl-sl oom/rr alg POR,g even mod bri-bri yel FLOR,fr-g brn/tr blk STN,g fast CUT"

6450.00 6460.00 "LS AA,fr-g oc-oom/tr intxl POR,fr-g mod bri yel FLOR,g ltbrn-brn/tr blk STN,ABNT CACO3 FRAG"

6460.00 6490.00 "DECR CACO3 FRAG IN SPL
LS AA,micxl-gran,micsuc,occ suc,ooc-oom GRNST,sl incr scat-intbd dns-sl ool PCKST,chky-anhy/tr scat-intbd xl ANHY,fr-g ooc-oom/tr intxl POR,g even mod bri-bri yel FLOR,g-fr ltbrn-brn/tr blk STN,g fast-slow blooming mlky CUT"

6490.00 6510.00 "LS ltbrn,occ tan,brn,micxl-vfxl-gran,crpxl ip,ooc-oom GRNST,tr scat-intbd PCKST,chky-anhy/tr xl ANHY frag-incl,g ooc-oom-intxl POR,g even mod bri/tr scat bri yel FLOR,g ltbrn-tr brn & blk STN,g mod fast stmg CUT"

6510.00 6520.00 "LS AA,POR AA,incr bri-mod bri yel FLOR,g ltbrn-incr brn STN,tr dkbrn-blk STN,g mod fast-fast stmg mlky CUT"

6520.00 6540.00 "LS AA,micxl-gran,micsuc,occ suc,ooc-oom GRNST,tr scat-intbd dns PCKST,chky/rr plty prtgs-frag,anhy/rr intbd xl ANHY,g ooc-oom/tr intxl POR,g even mod bri-bri yel FLOR,g-fr ltbrn-brn/tr blk STN,g mod fast-slow stmg mlky CUT"

6540.00 6550.00 "LS AA,pred ooc-oom GRNST,sl incr scat-intbd chky dns-sl ool PCKST,sl anhy/rr intbd xl ANHY,POR-FLOR AA,g ltbrn-brn/scat dkbrn & blk STN,g fast-mod fast stmg/tr blooming mlky CUT"

6550.00 6570.00 "LS ltbrn-brn,occ bf,micxl-vfxl,gran-suc ip,pred ooc-oom-alg GRNST,rr scat sl ool PKST,anhy ip,scat ANHY xl-incl-occ POR fl,v sl dol-occ DOL rich cmt,n-rr trnsl CHT frag,fr-g alg-intxl-ool POR,fr-g bri yel FLOR,fr-g lt-mbrn-tr blk STN,g mod fast-fast CUT"

DEPTH	LITHOLOGY

6570.00 6580.00 "TR TRNSL-CLR CACO3 FRAG IN SPL
LS AA,POR-FLOR-STN-CUT AA"

6580.00 6600.00 "TR TRNSL-CLR CACO3 FRAG IN SPL
LS AA,sl incr alg mat,incr intxl-alg POR,FLOR-STN-CUT AA "

6600.00 6620.00 "TR TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn-brn,occ bf,micxl-vfxl,gran-suc ip,pred ooc-oom GRNST,sl alg,rr scat sl ool PKST,anhy ip,scat ANHY xl-incl-occ POR fl,v sl dol-occ DOL rich cmt,fr-g alg-intxl-ool POR,fr-g bri yel FLOR,fr-g lt-mbrnSTN-tr blk dd o STN,g mod fast-fast stmg CUT"

6620.00 6640.00 "DECR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn,occ brn-mbrn,micxl-vfxl,gran-suc,occ ooc-oom-sl alg,pred GRNST w/rr crm-brn sl ool PKST,occ DOL rich cmt,sl anhy-occ ANHY xl-incl-occ POR fl,POR-FLOR-STN-CUT AA"

6640.00 6660.00 "ABNT AMNT TRNSL-CLR CACO3 FRAG IN SPL
LS AA,w/sl incr blk dd STN,POR-FLOR-STN-CUT AA"

6660.00 6680.00 "DECR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn,occ brn-mbrn,micxl-vfxl,gran-suc,occ ooc-oom,pred alg GRNST w/rr crm-brn sl ool PKST,occ DOL rich cmt,sl anhy-occ ANHY xl-incl-occ POR fl,g intxl-fr alg-tr ool POR,fr-g bri yel FLOR,fr ltbrn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"

6680.00 6690.00 "LS AA,incr ooc-oom mat,g intxl-fr alg-ool POR,FLOR-STN-CUT AA"

6690.00 6700.00 "ABNT AMNT TRNSL-CLR CACO3 FRAG IN SPL
LS AA,sl decr ooc-oom mat,POR-FLOR-STN-CUT AA"

6700.00 6710.00 "LS ltbrn-brn,rr dkbrn,micxl-vfxl,gran-suc,pred ooc-oom alg GRNST,w/v rr crm-wh-tan sl ool PKST,AA,fr-g intxl-alg-fr ool POR,fr bri-tr dull yel FLOR,fr ltbrn-tr blk STN,fr-g mod fast-fast stmg CUT"

6710.00 6730.00 "LS ltbrn,occ brn-mbrn,micxl-vfxl,gran-suc,pred GRNST w/fr amnts ooc-oom-alg mat,rr crm-brn sl ool PKST,tr DOL rich cmt,sl anhy-rr ANHY xl-incl-occ POR fl,g intxl-fr alg-ool POR,fr bri yel FLOR,fr-g ltbrn STN,tr blk dd o STN,fr-g mod fast-fast stmg CUT"

6730.00 6740.00 "DECR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS AA,pred GRNST w/scat ooc-oom-alg mat,POR-FLOR-STN-CUT AA"

6740.00 6760.00 "ABNT AMNT TRNSL-CLR CACO3 FRAG IN SPL
LS brn-mbrn,occ ltbrn,pred GRNST AA,w/sl incr crm-wh-tan sl ool chk PKST,fr-g bri yel FLOR,fr-g ltbrn-brn STN,tr-fr blk dd o STN,fr-g fast stmg CUT"

6760.00 6770.00 "LS AA,fr-g intxl-fr alg-ool POR,FLOR-STN-CUT AA"

6770.00 6790.00 "LS ltbrn,brn-gybrn ip,micxl-vfxl,gran-micsuc,pred GRNST w/fr amnt ooc-oom-alg mat,tr crm-tan sl ool dns PKST,tr DOL rich cmt,anhy-rr ANHY xl-incl-occ POR fl,g intxl-alg-tr ool POR,fr bri yel FLOR,fr-g brn STN,tr blk dd o STN,fr-g fast stmg CUT"

DEPTH	LITHOLOGY

6790.00 6810.00 "DECR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn,occ brn-gybrn,micxl-vfxl,gran-suc,occ ooc-oom-sl alg,pred GRNST w/tr crm-tan-wh v sl ool PKST,occ DOL rich cmt,sl anhy-occ ANHY xl-incl-occ POR fl,v rr trnsl-bf CHT frag,POR-FLOR-STN-CUT AA"

6810.00 6820.00 "LS AA,sl incr crm-wh,occ bf v sl ool-chk PKST,fr-g intxl-tr alg-ool POR,fr bri-tr dull yel FLOR,fr ltbrn-brn STN,tr blk dd o STN,fr-g fast stmg CUT"

6820.00 6840.00 "LS ltbrn-brn,mbrn ip,micxl-vfxl,gran-micsuc,pred alg GRNST w/fr amnt ooc-oom mat,tr crm-tan-wh sl ool dns PKST,tr DOL rich cmt,anhy-rr ANHY xl-incl-occ POR fl,g intxl-alg-tr ool POR,fr bri yel FLOR,fr-g brn STN,tr blk dd o STN,fr-g fast stmg CUT"

6840.00 6860.00 "DECR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn-brn,occ mbrn-gybrn,micxl-vfxl,gran-micsuc,pred ooc-oom-alg GRNST,w/tr crm-tan-wh crpxl chk v sl ool PKST,anhy ip,rr ANHY xl-incl,v rr trnsl-bf CHT frag,g intxl-fr alg-ool POR,fr-g dull-bri yel FLOR,fr brn-rr blk STN,fr-g mod fast-fast stmg CUT"

6860.00 6880.00 "LS AA,scat v sl fos chk anhy ip crm-wh-bf PKST incl,fr-g intxl-alg-tr-fr ool POR,FLOR-STN-CUT AA"

6880.00 6900.00 "TR CACO3 FRAG IN SPL FR-G SPLS
LS AA,v sl incr PKST AA,pred intxl POR,FLOR-STN-CUT AA"

6900.00 6920.00 "DECR TO VERY MINOR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS ltbrn-brn,occ mbrn-gybrn,micxl-vfxl,gran-suc,pred ooc-oom-alg GRNST,w/rr crm-tan-wh crpxl chk sl ool PKST,anhy ip,scat ANHY xl-incl,n-v rr trnsl-bf CHT frag,fr-g intxl-ool-tr alg POR,fr-g dull-bri yel FLOR,fr brn-rr blk STN,fr-g mod fast-fast stmg CUT"

6920.00 6940.00 "LS ltbrn-occ grdg to brn/tr ltgybrn-wh-trnsl strks,micsuc-vfxl-gran,occ crpxl,ooc-oom GRNST,tr scat-intbd dns PCKST,chky-anhy/tr xl ANHY incl & POR fl,v sl dol,POR-FLOR AA,g-fr lt brn-brn/scat dkbrn & tr blk STN,CUT AA"

6940.00 6970.00 "LS ltbrn-brn/occ wh-trnsl strks,tr dkbrn,micsuc-vfxl-gran,occ crpxl,ooc-oom GRNST,tr scat-intbd dns PCKST,chky-anhy/tr xl ANHY incl & POR fl,v sl dol/rr DOL cmt-strk,g ooc-oom-intxl POR,g even mod bri-bri yel FLOR,STN & CUT AA"

6970.00 7000.00 "SL INCR AMNTS TRNSL-CLR CACO3 FRAG IN SPL LS AA,pred ooc-oom-sl ool GRNST,rr-tr scat-intbd dns PCKST,chky-anhy/rr-tr xl ANHY incl & POR fl,v sl dol/rr DOL cmt strk,vrr free ool fos,g ooc-oom-intxl POR,FLOR AA,g lt brn-brn/scat dkbrn & tr blk STN,g mod fast stmg mlky CUT"

7000.00 7020.00 "TR CACO3 FRAG IN SPL FR-G SPLS
LS ltbrn-brn,occ dkbrn,tr wh-trnsl strks,micsuc-vfxl-gran,occ crpxl,ooc-oom-sl ool GRNST,tr scat-intbd dns PCKST,chky-anhy/rr-tr xl ANHY incl & POR fl,v sl dol/decr DOL cmt-strk,g ooc-oom-intxl POR,g even mod bri-incr bri yel FLOR,STN & CUT AA"

7024.00 7040.00 "LS AA,ooc-oom-sl ool GRNST,tr scat-intbd sl ool dns PCKST,chky-anhy/tr POR fl,rr xl ANHY incl,v sl dol,g ooc-oom-intxl POR,g even bri-mod bri yel FLOR,g lt brn-brn/scat dkbrn & tr blk STN,g fast-mod fast stmg mlky CUT"

DEPTH	LITHOLOGY

7040.00 7060.00 "LS AA,ooc-oom-sl ool GRNST,tr scat-intbd dns sl ool PCKST,sl chky-anhy/tr POR fl,rr xl ANHY incl-frag,tr-rr ool,vrr-rr dol strk,g ooc-oom-intxl POR,g even bri-mod bri yel FLOR,g ltbrn-brn/scat dkbrn & tr blk STN,g mod fast-fast stmg mlky CUT"

7060.00 7080.00 "LS AA/v sl incr dns-sl ool chky PKST,tr scat free ool fos,ooc-oom-intxl POR/tr chky-anhy POR fl,g even bri-mod bri yel FLOR,g ltbrn-brn/scat dkbrn & blk STN,g-fr slow-mod fast stmg mlky CUT"

7080.00 7100.00 "INCR AMNTS TRNSL-CLR CACO3 FRAG IN SPL
LS AA bcmg v sl incr brn-dkbrn,micsuc-vfxl-gran.occ crpxl,ooc-oom-v sl ool GRNST,tr scat-intbd dns sl ool PCKST,sl dol/rr DOL cmt strk,chky-anhy/tr POR fl,rr xl ANHY frag,POR-FLOR AA,g ltbrn-brn/scat dkbrn-tr blk STN,g fast-mod fast stmg mlky CUT "

7100.00 7120.00 "LS ltbrn,brn,occ dkbrn,tr wh-trnsl strks,micsuc-vfxl-gran,occ crpxl,GRNST AA,tr scat-intbd PCKST AA,chky-anhy/rr xl ANHY incl & POR fl,v sl dol/decr DOL strk,g ooc-oom-intxl/vrr vug POR,FLOR-STN-CUT AA"

7120.00 7130.00 "LS AA,pred ooc-oom GRNST,tr scat-intbd dns PCKST,POR-FLOR-STN-CUT AA"

7130.00 7150.00 "LS ltbrn-brn,occ dkbrn,tr wh-trnsl strks,vfxl-micsuc-gran,occ crpxl,ooc-oom GRNST,tr PCKST AA,chky-anhy/rr-tr xl ANHY incl & POR fl,v sl dol/tr DOL cmt-strk,vrr trnsl ool CHT frag,POR-FLOR-STN AA,g fast-mo fast stmg mlky CUT"

7150.00 7160.00 " INCR CACO3 FRAG IN SPLS
LS lt-mbrn,occ brn-gybrn,ooc-oom-sl alg GRNST AA,rr scat tt PKST,fr-g FLOR-STN-CUTAA"

7160.00 7180.00 "LS ltbrn-brn,occ gybrn,micxl-vfxl,suc-gran,pred ooc-oom-sl alg GRNST,rr wh-crm crpxl sl ool PCKST-chk ip,anhy ip-rr xl ANHY incl-rr POR fl,sl dol-tr DOL cmt,n-v rr trnsl CHT frag,fr-g intxl-ool-alg POR,fr-g dull-bri yel FLOR,STN-CUT AA"

7180.00 7200.00 "LS AA,incr tan-crm-wh chk ip tt v sl fos PKST,n-v rr CHT AA,fr-g intxl-ool-tr alg POR,fr-g dull-bri yel FLOR,fr-g ltbrn-brn STN,tr blk dd o STN,fr-g mod fast-fast stmg mlky CUT"

7200.00 7220.00 "VARI AMNTS CACO3 FRAG IN SPLS LS lt-mbrn,occ brn-gybrn,crpxl-vfxl,gran-micsuc ip,pred ooc-oom-sl alg GRNST,tr tan-crm-wh dns sl ool PKST,sl anhy-rr xl-incl,occ ANHY fl POR,g intxl-fr alg-ool POR,fr-g dull-bri yel FLOR,fr ltbrn-brn STN,tr blk STN,fr-g mod fast-fast stmg CUT "

7220.00 7240.00 "LS AA,sl decr intxl-alg POR,FLOR-STN-CUT AA"

7240.00 7250.00 "LS AA,pred GRNST AA,w/incr PKST AA,fr intxl-tr alg-ool POR,fr dull-bri ye FLOR,fr brn-rr blk STN,fr g mod fast-fast stmg CUT"

7250.00 7260.00 "LS tan-ltbrn,occ brn-gybrn,crpxl-vfxl,occ gran-micsuc,pred intbd ooc-oom-sl alg GRNST & dns sl chk occ ool PKST,AA,tr-fr intxl-ool-rr alg POR,fr dull-bri yel FLOR,fr brn-tr blk STN,tr-fr g fast stmg CUT"

7260.00 7290.00 "SL TR CACO3 FRAG IN SPL
LS pred PKST AA w/intbd ooc-oom-alg GRNST AA,sl anhy-rr ANHY incl-xl-rr POR fl,sl dol-rr DOL rich cmt,tt-fr intxl-ool-rr alg POR,fr dull-bri yel FLOR,tr-fr ltbrn-brn STN,tr blk dd o STN,tr g mod fast-fast stmg mlky CUT"

DEPTH	LITHOLOGY

7290.00 7310.00 "LS ltbrn-tan,occ brn-mbrn,crpxl-vfxl,gran-micsuc ip,occ dns-chk,pred intbd tt sl fos PKST & ooc-oom-v sl alg GRNST,sl dol-occ DOL rich cmt,v rr ANHY xl-incl-POR fl,tt-g intxl-tr ool-rr alg POR,fr dull-bri yel FLOR,n-fr ltbrn-rr blk STN,n-g fast stmg CUT"

7310.00 7320.00 " VARI AMNTS CACO3 FRAG IN SPLS
LS AA,bcmg pred ooc-oom-sl alg GRNST,w/decr PKST,fr-g intxl-ool-tr alg POR,fr-g dull-bri yel FLOR,fr-g brn-ltbrn STN,tr blk dd o STN,fr-g mod fast-fast stmg mlky CUT"

7320.00 7340.00 "LS tan-ltbrn,occ brn-gybrn,micxl-vfxl,occ gran-micsuc,pred ooc-oom-sl alg GRNST,w/scat crpxl occ chk sl ool PKST,occ DOL rich cmt,rr ANHY xl-incl-POR fl,tr-g intxl-ool-rr alg POR,fr-g dull-bri yel FLOR,fr-g brn-tr blk STN,fr g fast stmg mlky CUT"

7340.00 7370.00 "LS tan-ltbrn,occ brn-gybrn,micxl-vfxl,occ gran-micsuc,pred ooc-oom-sl alg GRNST,w/decr crpxl occ chk sl ool PKST,occ DOL rich cmt,rr ANHY xl-incl-POR fl,fr-g intxl-ool-rr alg POR,fr-g dull-bri yel FLOR,fr-g brn-tr blk STN,fr-g fast stmg mlky CUT"

7370.00 7380.00 " INCR AMNT OF CACO3 FRAG IN SPL
LS AA,pred GRNST AA,w/v sl incr PKST AA,POR-FLOR-STN-CUT AA"

7380.00 7400.00 " VARI AMNTS CACO3 FRAG IN SPLS
LS AA,pred ooc-oom-sl alg GRNST,w/scat PKST AA,fr-g intxl-ool-tr alg POR,fr-g dull-bri yel FLOR,fr brn-ltbrn STN,rr-tr blk dd o STN,fr-g mod fast-fast stmg mlky CUT"

7400.00 7420.00 "LS tan-ltbrn,occ brn-gybrn,crpxl-vfxl,occ gran-micsuc,pred ooc-oom-sl alg GRNST,w/scat dns-cln occ chk sl ool PKST,occ DOL rich cmt,rr ANHY xl-incl-POR fl,fr-g intxl-ool-rr alg POR,fr-g dull-bri yel FLOR,fr-g brn-tr blk STN,fr-g fast stmg mlky CUT"

7420.00 7440.00 "LS AA,incr alg mat,sl decr PKST AA,incr ooc-oom-alg POR,FLOR-STN-CUT AA"

7440.00 7460.00 "LS tan-ltbrn,occ brn-gybrn,micxl-vfxl,occ gran-micsuc,pred ooc-oom-sl alg GRNST,w/scat crpxl occ chk sl ool PKST,occ DOL rich cmt,rr ANHY xl-incl-POR fl,fr-g ool-alg-tr intxl POR,fr-g dull-bri yel FLOR,fr-g brn-tr blk STN,fr-g fast stmg mlky CUT"

7460.00 7480.00 "LS AA,pred ooc-oom-alg GRNST,w/scat PKST AA,fr-g ool-alg-fr intxl POR,fr dull-bri yel FLOR,fr brn-ltbrn STN,rr blk dd o STN,fr-g mod fast-fast stmg mlky CUT"

7480.00 7500.00 "LS AA,pred GRNST AA,w/v sl incr PKST AA,sl decr intxl-alg POR,FLOR-STN-CUT AA"

7500.00 7520.00 "LS ltbrn,occ mbrn,tan ip,crpxl-vfxl,gran-micsuc ip,pred ooc-oom-sl alg GRNST,w/scat dns tan occ chk sl ool PKST,occ DOL rich cmt,scat ANHY xl-incl-rr POR fl,fr-g intxl-ool-tr alg POR,fr-g dull-bri yel FLOR,tr-fr ltbrn-rr blk STN,fr-g mod fast-fast CUT"

7520.00 7540.00 "LS AA,w/sl incr sl fos PKST AA,sl decr intxl POR,FLOR-STN-CUT AA"

7540.00 7560.00 "LS AA,pred GRNST AA,w/rr-tr crm-wh-tan dns occ chk sl fos PKST,occ DOL cmt,ANHY AA,fr-g ool-alg-fr intxl POR,FLOR-STN-CUT AA"

DEPTH	LITHOLOGY

7560.00 7580.00 "LS ltbrn,occ mbrn,tan ip,micxl-vfxl-gran,micsuc-crpxl,pred ooc-oom-sl alg GRNST,tr scat dns sl dol-chk-ool PKST,tr DOL rich cmt,scat ANHY xl-incl-rr POR fl,g-fr intxl-ool-tr alg POR,g even dull-bri yel FLOR,fr-g ltbrn-vrr blk STN,g mod fast-fast stmg CUT"

7580.00 7600.00 "LS AA,pred GRNST AA,w/sl incr tan-crm-wh dns-occ chky ool-sl fos PKST,occ DOL cmt strks,ANHY AA,g-fr ool-oom-intxl/tr scat pp vug POR,g even bri-mod bri yel FLOR,g-fr ltbrn-scat brn/vrr pp blk dd o STN,g mod fast-fast stmg mlky CUT"

7600.00 7627.00 "SL INCR CACO3 FRAG IN SPLS
LS ltbrn-brn,occ tan,tr llgybrn-crm incl-strk,micxl-vfxl-gran,micsuc-crpxl,pred GRNST AA/scat PKST AA,tr DOL rich cmt strk,tr ANHY xl-incl-POR fl,POR AA,g even dull-mod bri/scat bri yel FLOR,fr-g ltbrn-brn/vrr blk STN,g mod fast-fast stmg CUT"

FORMATION TOPS

OPERATOR: MOBIL
WELL NAME: RATHERFORD UNIT #21-24 NW 1-A HORIZONTAL LATERAL LEG #1

FORMATION NAME		SAMPLES MEASURED DEPTH	SAMPLES TRUE VERTICAL DEPTH	DATUM KB:4683'
LOWER ISMAY		5375'	5373'	-690'
GOTHIC SHALE		5435'	5422'	-739'
DESERT CREEK		5460'	5437'	-754'
DC 1-A ZONE		5474'	5443'	-760'

GEOLOGICAL SUMMARY

AND

ZONES OF INTEREST

The Mobil Exploration and Production U.S. Inc., Ratherford Unit #21-24 Southeast Horizontal Lateral Leg #1 was a re-entry of the Mobil Ratherford Unit #21-24 located in Section 20, T41S, R24E. The southwest Lateral Leg #1 was begun on November 7, 1997. After drilling out the old bridge plug and squeezing the old perforations, milling was begun on November 8th. The curve section was completed on November 10, 1997 at a measured depth of 5525', 5451' true vertical depth, 8 feet into the 1-A porosity and the lateral section was begun in the 1-A porosity zone on November 12, 1997. The lateral reached a measured depth of 8077', true vertical depth of 5463.3', with a horizontal displacement of 2557.7' and true vertical plane of 315.1 degrees, on November 20, 1997 in the upper Desert Creek 1-A zone. The problems encountered while drilling this lateral were the flow of fluids (oil and gas with minor amounts of water) encountered almost as soon as the 1-A zone was penetrated. The well had to be weighted to 14.2 ppg to control the flow at a measured depth of 5818'. The hole was first displaced with 15.5 ppg mud and the pipe became differentially stuck. A slug of water was spotted to free the drill pipe and the 14.2 ppg mud was circulated. As the lateral was the mud weight slowly decreased and the flow resumed. Drilling was halted again at a measured depth of 6041' and at 7564' to rebuild and maintain a mud system of 14.2 ppg to control the flow of fluid. A pressure check at the manifold showed pressures up to 250 psi. This lateral used low solids non-dispersed chemical drilling mud with polymer sweeps as the drilling fluid. The background gases noted on the accompanying mud log were high due to the oil and gas flow encountered through out the lateral section. The samples had good oil shows through out the 1-A zone drilled.

The primary objective of the Ratherford Unit #21-24 Leg 2 horizontal lateral was the effective porosity, staining and reservoir properties in the 1-A zone of the Desert Creek Member of the Upper Paradox Formation. The very basal portion of the Upper Ismay, the Lower Ismay, the Gothic Shale and the transition zone at the top of the Desert Creek were penetrated while drilling the curve section. The curve was landed feet into the 1-A porosity horizon. Kick off point for this lateral was at a measured depth of 5325', 5325' true vertical depth, in the upper 1/3 of the Upper Ismay member of the Paradox Formation.

The Upper Ismay seen in the curve section of this well was predominately white to cream to tan, occasionally light gray brown to brown, cryptocrystalline to microcrystalline, chalky to clean and slightly argillaceous to occasionally slightly dolomitic with scattered anhydrite crystals and occasional fracture filling. Through out the Upper Ismay there were thin interbedded brown, microcrystalline, limy, argillaceous to clean dolomites. Dark brown to smoky gray to tan chert fragments and thin interbeds of dark gray to black shale were also noted in Upper Ismay. No visible staining or gas increases and only mineral fluorescence were noted in the scattered very thin porosity streaks. The Hovenweep marker between the Upper Ismay and Lower Ismay was very poorly developed in this lateral.

The top of the Lower Ismay was picked at 5375' measured depth, 5373' true vertical depth, and was based primarily on the slight change in lithology as well as comparison to the well log for the original well bore. The Lower Ismay was predominately limestone, light to medium gray brown to brown to cream, occasionally white, cryptocrystalline to microcrystalline, dense, occasionally to slightly chalky, slightly fossiliferous and slightly silty. Scattered through out the Lower Isamy were brown to translucent chert and thin black carbonaceous shale partings. No shows were noted in these limestones. In the limestones near the base of the Lower Ismay, cream to light gray, slightly sandy, very limy siltstones were noted as very thin interbeds and laminations. These siltstones had very

limestone rich cement and graded to a very silty to very slightly sandy limestone but displayed no shows. The lower 25' of the Lower Ismay from 5410' to the top of the Gothic Shale at 5435', the limestones became increasingly shaley and graded to a medium brown to medium gray, dense, slightly anhydritic, increasingly shalely, dark brown to gray brown, cryptocrystalline, very argillaceous to clean, dense dolomite with no sample shows.

The top of the Gothic Shale was encountered at 5435' measured depth, 5422' true vertical depth and was predominantly gray brown to black, silty, carbonaceous, soft to moderately firm, calcareous to slightly dolomitic and slightly micaceous. Scattered within the Gothic were very thin, cryptocrystalline to microcrystalline, earthy, limestone and dolomite partings and inclusions, with very rare scattered anhydrite crystals. The top of the Gothic was a fairly gradational contact with no visible decrease or increase in penetration rate noted. The base of the Gothic was marked by an abrupt decrease in penetration rate as well as a sharp lithology change. The top of the Gothic was marked by a slight increase in shale in the samples

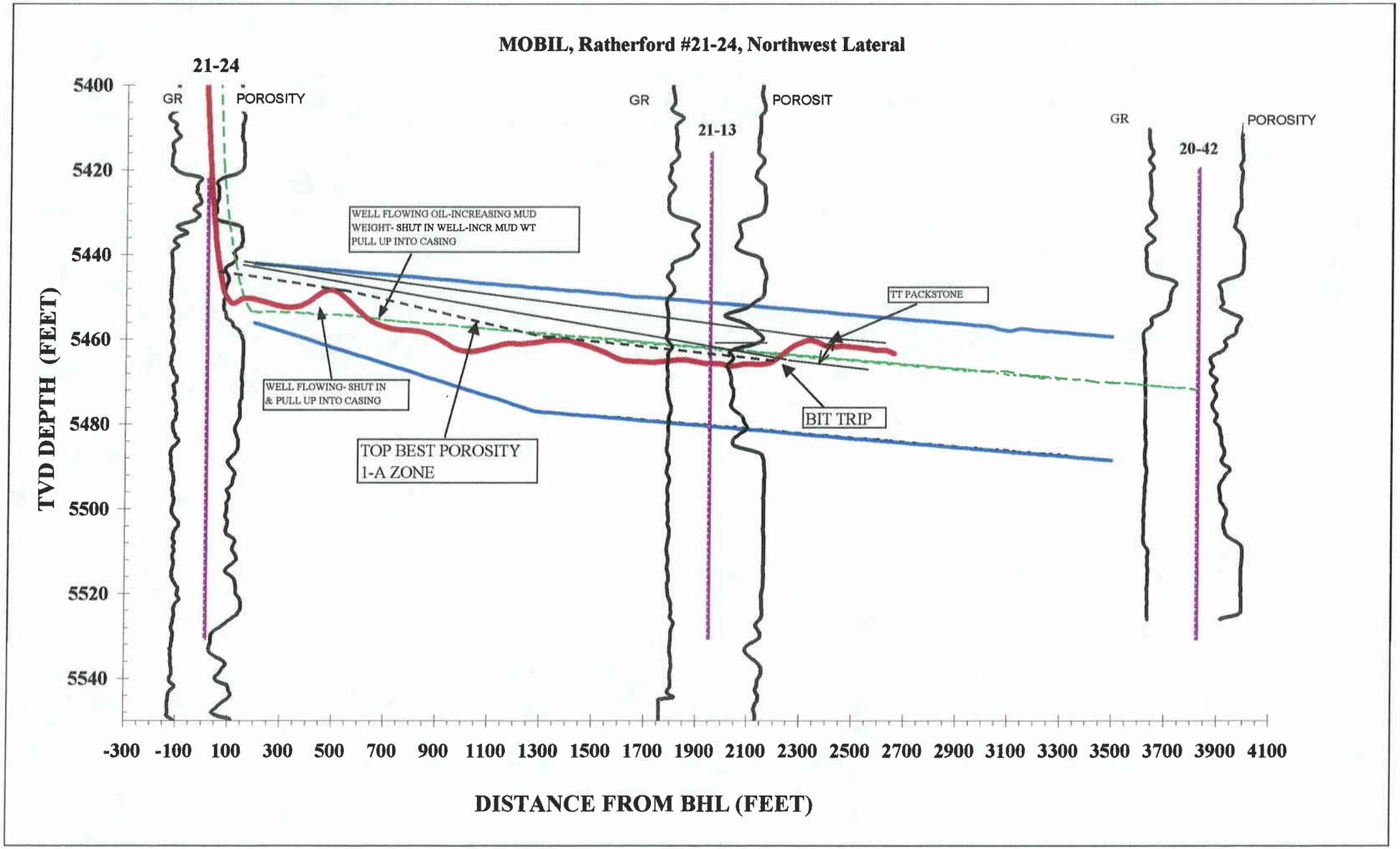
The top of the Desert Creek is commonly picked at the Gothic Shale to transition zone facies change, which in this lateral occurred at a measured depth of 5460' and a true vertical depth of 5437' and was marked by a significant decrease in penetration rate and marked increase in limestones and thinly interbedded dolomites in the samples. The lithology of the transition zone in this well was primarily limestone, light to medium gray brown, cryptocrystalline to microcrystalline, platy, argillaceous to very slightly silty in part, slightly anhydritic with occasional carbonaceous shale partings. Also thin interbedded brown, cryptocrystalline to microcrystalline, argillaceous, very limy dolomites were seen. Only very minor intercrystalline porosity was noted, with a very weak mineral fluorescence. A significant gas increase was noted at the very base of the transition zone, just above the 1-A porosity zone.

The top of the Desert Creek 1-A zone was picked at 5474' measured depth, 5443' true vertical depth and was based on sample identification as well as the significant increase in the penetration rate. The top of the 1-A zone was approximately 4' low to the top on the porosity log for this well. The porosity of the 1-A zone was in an oolicastic to oomoldic limestone grainstone, which was tan to brown to dark brown to gray brown, very fine to cryptocrystalline, with a granular to microsucrosic to traces of sucrosic texture, very rare scattered translucent to clear chert fragments were noted. It contained scattered anhydrite crystals to inclusions and some porosity filling, with a dolomite rich cement and had a well developed oomoldic to oolicastic to intercrystalline and some algal porosity development. Dark brown to brown stain, with abundant black bitchimum (dead oil staining) staining was noted in the samples along with a good yellow gold fluorescence and a moderately fast to fast streaming to milky cut was noted through out the length of the lateral. As the lateral was continued, the amounts of bitchimum (dead oil staining) appeared to decrease. Scattered with in the very good, porous oolitic grainstones were thin, tight, dense, slightly oolictic limestone packstones, white to cream with no to visible porosity development and had no visible sample show.

The curve section was completed at a measured depth of 5525', 5451' true vertical depth, and a vertical section (horizontal displacement) of 110', in the oolicastic to oolmoldic limestone grainstone porosity, approximately 1' above the proposed target line, with a 92 degree angle. The well bore was slowly turned toward a 90 degree angle and then slowly turned downward to acquire the proposed target line. The lateral section was drilled through out its length in the porosity zone of the 1-A. The lithology of the 1-A porosity zone through out its length in the lateral remained fairly consistent with only very minor variations in porosity type being noted. The lithology of the 1-A was a light to medium brown, occasionally dark brown to gray brown, microcrystalline to very finely crystalline, microsucrosic to occasionally sucrosic, oolicastic to oomoldic to some algal limestone grainstone. It contained very rare scattered anhydrite crystals to inclusions and some porosity filling, slightly dolomitic, with a trace of dolomite rich cement, and very thin, scattered cream to tan, cryptocrystalline, occasionally oolitic to very slightly fossiliferous limestone packstone inclusions to laminations.

The 1-A porosity zone had good visible porosity and a good sample show through its length. Of note was that the well flowed oil, gas and minor amounts of water while drilling the lateral, beginning almost as soon as the top of the 1-A zone was penetrated. After landing the curve, the lateral section of the 1-A, the well began flowing oil, gas and a minor amount of water, requiring the well being mudded up. At a measure depth of 5480', 5448' true vertical depth, with a horizontal displacement of 65', oil was noticed forming on the pits. The background gas in the lateral, as was noticed in the curve, was constantly high, with the background gases reflecting the increase or decrease in flow. When the rate of flow increased the background gases increased, and conversely when the flow slowed the gases decreased. Through out the length of the lateral drilled in the 1-A, the oolicastic to oolimoldic limestone grainstones were consistent, until reaching a measured depth of 7664', 5462' true vertical depth, with a horizontal displacement of 2245', when the top of the 1-A zone was encountered. This determination was made due to the penetration rate and the quality of porosity decreasing significantly, as well as the amount of packstone increasing, as the well path approached the target line. The base of the 1-A was not encountered while drilling the lateral. The best drilling and porosity appeared to be just below the proposed target line beginning at a horizontal displacement of 1000'. The limestone packstones at the top of the 1-A was predominately a cream to white to tan, cryptocrystalline to occasionally microcrystalline, occasionally platy, chalky, dense, very slightly anhydritic, occasionally fossiliferous to very slightly oolictic, with very rare, very thin, scattered light brown to tan, microcrystalline to very finely crystalline limestone grainstone streaks. The tight limestone packstones had no visible sample shows, while the thin grainstones has poor to occasionally moderately fair sample show. After the top was penetrated, the well path drifted upward to a true vertical depth of 5460', while attempting to turn the well bore downward to reacquire the target line. The lithology remained the predominately limestone as the well path continued to its termination. The lateral was terminated, at a measured depth of 8077', 5463.3' true vertical depth and a horizontal displacement of 2557.' on November 20, 1997.

In tracking the well bore through the 1-A porosity bench, the intercrystalline to oolicastic to oolmoldic and minor algal porosity was very good with only very minor changes in rock classification, from predominately intercrystalline and oolitic porosities in the limestone grainstones to the tight limestone packstones in thin laminations and inclusions with in the 1-A porosity zone as well as at the top of the zone. Sample shows were predominated good and stayed consistent throughout the length of the lateral, until the top of the 1-A zone was penetrated. The background gases began low in the curve section and increased rapidly upon penetrating the 1-A zone prior to landing the curve, and began high in the lateral section, and remained high through out the porosity, but very slowly decreased upon penetrating the packstones at the top of the 1-A. The effective or best porosity was associated with the oolicastic and oolmoldic to very minor algal limestone grainstone facies which had fair to good intercrystalline to oolitic porosities. Very minor anhydrite plugging was noted throughout. The well produced significant amounts of oil and gas with very minor amounts of water while drilling the 1-A zone.


MOBIL, Ratherford #21-24, Northwest Lateral
21-24
GR
POROSITY
21-13
POROSIT
20-42
WELL FLOWING OIL-INCREASING MUD WEIGHT- SHUT IN WELL-INCR MUD WT PULL UP INTO CASING
WELL FLOWING- SHUT IN & PULL UP INTO CASING
TOP BEST POROSITY 1-A ZONE
TT PACKSTONE
BIT TRIP
TVD DEPTH (FEET)
5400
5420
5440
5460
5480
5500
5520
5540
-300 -100 100 300 500 700 900 1100 1300 1500 1700 1900 2100 2300 2500 2700 2900 3100 3300 3500 3700 3900 4100
DISTANCE FROM BHL (FEET)

ROCKY MOUNTAIN GEO-ENGINEERING
Well Logging • Consulting Geology • Coal Bed Methane Services • Computerized Logging Equipment & Software
ROCKY MOUNTAIN GEO-ENGINEERING CORP.
2450 INDUSTRIAL BLVD. • GRAND JUNCTION, CO 81505
(970) 243-3044 • (FAX) 241-1085

Wednesday, November 26, 1997

Division of Oil & Gas Mining
State of Utah
1636 W. North Temple
Salt Lake City, UT 84116

Re: Ratherford Unit #21-24 Leg #1
Sec. 21, T41S, R24E
San Juan County, Utah
43 037 31720
DRL

Dear Sirs:

Enclosed are the final computer colored logs and geology reports for the above referenced well.
IN LOG FILE

We appreciate the opportunity to be of service to you and look forward to working with you again in the near future.

If you have any questions regarding the enclosed data, please contact us.

Sincerely,

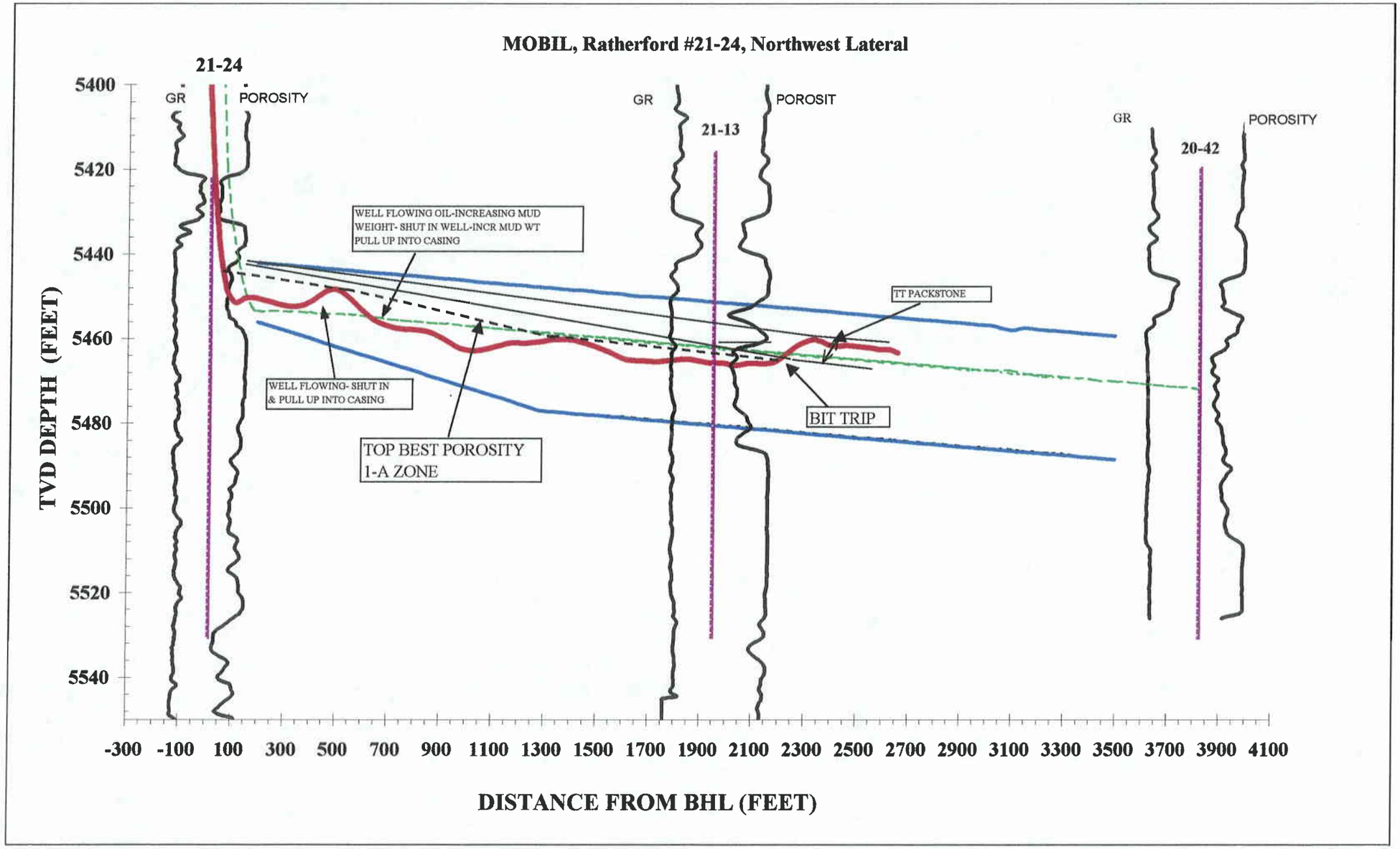
Bill Nagel

Bill Nagel
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log & 1 Geology Report

cc Letter Only; Dana Larson; Mobil E & P U.S., Inc.; Midland, TX


MOBIL, Ratherford #21-24, Northwest Lateral
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TOP BEST POROSITY 1-A ZONE
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Wednesday, November 26, 1997

Division of Oil & Gas Mining
State of Utah
1636 W. North Temple
Salt Lake City, UT 84116

Re: Ratherford Unit #21-24 Leg #1
Sec. 21, T41S, R24E
San Juan County, Utah
43 037 31720

Dear Sirs: DRL

Enclosed are the final computer colored logs and geology reports for the above referenced well.
IN LOG FILE

We appreciate the opportunity to be of service to you and look forward to working with you again in the near future.

If you have any questions regarding the enclosed data, please contact us.

Sincerely,

Bill Nagel

Bill Nagel
Senior Geologist

BN/dn

Enc. 1 Final Computer Colored Log & 1 Geology Report

cc Letter Only; Dana Larson; Mobil E & P U.S., Inc.; Midland, TX

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-355

6. If Indian, Allottee or Tribe Name: NAVAJO TRIBAL

7. If Unit or CA, Agreement Designation: RATHERFORD UNIT

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: RATHERFORD 21-24

2. Name of Operator: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM

9. API Well No.: 43-037-31720

3. Address and Telephone No.: P.O. Box 633, Midland TX 79702 (915) 688-2585

10. Field and Pool, or exploratory Area: GREATER ANETH

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 17, T41S, R24E
(NE/SE) 1980' FSL & 660' FEL

11. County or Parish, State: SAN JUAN UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other SIDETRACK	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

BHL:

LATERAL #1; 1646' NORTH & 2088' WEST FROM SURFACE SPOT (ZONE 1a).

SEE ATTACHED PROCEDURE.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title SHIRLEY HOUCHINS/ENV & REG TECH Date 5-7-98

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statem or representations as to any matter within its jurisdiction.

*** See Instruction on Reverse Side**

05/21/98
RJK

DRILLED FOOTAGE CALCULATION FOR DIRECTIONAL AND HORIZONTAL WELLS

Unit, Well Name: **Ratherford Unit, Well 21-24**
API Well #: **43-037-31720**
Well Completion: **Horizontal, Producer, 1 Lateral**

First leg description:		Lateral #1A1
Kick Off Point	MD	5316.00
Kick Off Point	TVD	5315.72
End of Leg	MD	8077.00
End of Leg	TVD	5462.70
	Footage drilled:	2761.00
Max. TVD Recorded		5462.70

Second leg description:
KOP MD:
KOP TVD:
EOL MD:
EOL TVD:
Footage drilled:
Max. TVD Recorded

Third leg description:
KOP MD:
KOP TVD:
EOL MD:
EOL TVD:
Footage drilled:

Fourth leg description:
KOP MD:
KOP TVD:
EOL MD:
EOL TVD:
Footage drilled:

Fifth leg description:
KOP MD:
KOP TVD:
EOL MD:
EOL TVD:
Footage drilled:

Total Footage Drilled (MD):	***2761.00***
Deepest point (TVD):	***5462.70***

ATTACHMENT - FORM 3160-5
RATHERFORD UNIT 21-24
14-20-603-355
NAVAJO TRIBAL
SAN JUAN, UTAH

10-30-97	CALLED B.L.M. @ 08:57 ON 10-29-97 TALKED TO BILL BLACKARD. INFORMED OF IMPENDING INTENT TO PREP. WELL FOR DRLG. RIG. OK. CALLED NAVAJO E.P.A. @ 9:01 ON 10-29-97 TALKED TO ANSWER MACHINE. INFORMED OF IMPENDING INTENT TO DIG SURFACE PIT AND LINE. MIRU NAVAJO WEST RIG #15. SHUT IN TBG. AND CSG. PRESSURE @ 10:00 WAS 50 PSI. BLEED TO 0 IN 10 MIN. UNSEAT PUMP. POH AND LAY DOWN RODS AND PUMP. NIPPLE DOWN PUMP WELL HEAD. NIPPLE UP BOPE. POH. 2.875" TBG. SIFN.
10-31-97	SHUT IN CSG. PRESSURE @ 7:30 WAS 50 PSI. OPEN TO PIT, MIRU BASIN WIRELINE UNIT. RIH CCL LOG AND CAST IRON BRIDGE PLUG TO 5335' SET RDMO BASIN WIRELINE. RIH WITH 2.875" TBG. 5290' TEST CSG. TO 1000 PSI. OK. LAY DOWN 2.875" TBG. SIFN.
11-01-97	SHUT IN CSG. PRESSURE @ 7:30 WAS 0 PSI. RIG DOWN RIG FLOOR, NIPPLE DOWN BOPE. NIPPLE DOWN NATIONAL TBG. HEAD. WELD ON EXTENSION TO 5.5" CSG. NIPPLE UP. TBG. HEAD WITH FLANGE OUTLETS. TEST TBG. HEAD TO 1400 PSI OK. NIPPLE UP TBG. HEAD CAP. SHUT WELL IN. RDMO NAVAJO WEST RIG #15. FINAL PREP. REPORT TURN WELL OVER TO DRLG. TOOLS.
11-06-97	FINISH RIGGING DOWN ROTARY RIG. NOTIFIED JIM THOMPSON W/STATE OF UTAH ABOUT MOVING TO RT 21-24 @ 0800 HRS. 11-6-97.
11-07-97	FINISH RU NAVAJO RIG 25. RAN MMS TEST. TEST TO 2000# HIGH AND 250# LOW PSI AOHDP TO TOP OF CIBP @ 5335'. RU POWER SWIVEL. START DRLG. ON CIBP. PUSH CIBP TO 5596'. (PERFS. 5438-5580)
11-08-97	POOH W/BIT AND LAY DOWN RU BASIN WL TRUCK. RAN CCL AND WL SET CICR @ 5335'. RD WL TRUCK. TIH W/CICR STINGER STING INTO RETAINER RU DOWELL. LOAD AND PRESSURE TEST ANNULUS AND CICR TO 500 # PUMP AND MIX 200 SXS. CLASS G CMT. @ 16 PPG. SD. WELL ON VAC. WOC. MIX AND PUMP 150 SKS. CLASS G NEAT CMT. @ 16 PPG. STRING OUT OF RETAINER. TOP OF CICR SHOULD BE CLEAN OF CMT. LAY DOWN 2 7/8" AOHDP, POOH W/SETTING TOOL. PREPARE TO PU WHIPSTOCK.
11-09-97	RIH DEGREE WHIPSTOCK, STARTING MILL, AOHDP, TO 15' ABOVE CICR @ 5335'. CIRC. DRILL STRING CAP. RU GYRO DATA. ORIENT AND SET WHIPSTOCK @ 318 GTF EVERY 200' TO SURFACE. RD WL. MILL W/STARTING MILL FROM 5316-5318' CIRC. POOH W/STARTING MILL AND LAY DOWN PU CSG. MILL AND WATER MELON MILL. TIH W/SAME. RU POWER SWIVEL. BREAK CIRC. MILL WINDOW FROM 5315.41-5324.39 + 1' FORMATION TO 5325.39'. TOOH W/MILLS AND LAY DOWN SAME.
11-10-97	LATERAL 1A1 PU CURVE BUILDING ASSY. ON 2 7/8" AOHDP TO 5300'. RU GYRO DATA. ORIENT AND WORK BIT THROUGH WINDOW. TIME DRILL FORM 5325-5329' W/GYRO. SLIDE DRILL W/WT. FROM 5329-5451' PUMP SWEEP OUT.
11-11-97	DRLG. CURVE ASSY. FROM 5451-TD 5425'. (MD 5525', TVD 451.93, ANGLE 90, AZ.310, VERT.SECTION 110.97) PUMP SWEEP. KILL WELL. POOH LAYING DOWN AOHDP. LAY DOWN CURVE BUILDING ASSY. CONTINUE PICKING UP PH-6 TBG.
11-12-97	FINISH PU PH-6 TBG. WORK BHA THROUGH CURVE SECTION. RU POWER SWIVEL. START CIRC. DRILL FROM 5525'. 5560' SLIDE/ROTATE DRILL AND SURVEYS FROM 5560-5818'

11-13-97	SHUT DOWN DRLG. TO RE-CONDITION MUD. PREPARE TO DRILL.
11-14-97	SLIDE/ROTATE DRILL AND SURVEYS FROM 5818-6042'.
11-15-97	SLIDE/ROTATE DRILL AND SURVEYS FROM 6042-6700'. LAST SURVEY @ 6642 MD, 90.20 ANGLE, 308.80 AZ., TVD 5460.95, VERT.SECTION 1225.
11-16-97	SLIDE/ROTATE DRILL AND SURVEYS FROM 6700-7250'.
11-17-97	SLIDE/ROTATE DRILL AND SURVEYS FROM 7250-7674' TOOH FOR BIT.
11-18-97	POH W/ BIT CIRC & COND MUD, RAISED MUD WT TO 15.2# CIRC WELL. SLIDE & ROTATE DRILLED LATERAL 1A1 FROM 7674-7709'
11-19-97	DRILLED LATERAL 1A1 FROM 7709-7929'.
11-20-97	SLIDE & ROTATE DRILLED LATERAL 1A1 FROM 7929-8077, TD LATERAL @ 8077 MD, 5463 TVD, 2657 VS. RIGGED UP SWIVEL WORKING DRILL PIPE OUT OF HOLE FROM 6006' TO 5696.
11-21-97	WORK DP OUT OF LATERAL & CURVE FROM 5696-5312, RIH W/ PH6 TBG, 7" GUIBERSON UNI-6 PKR, SET END OF TAILPIPE @ 5478, BTM PKR 5165, ON/OFF @ 5171'.
11-22-97	PRESS TESTED TBG PLUG TO 1000#, HELD OK, POH & LD DP, PH6 & SETTING TOOL, RIH W/ DC'S & DP POH & LD DP & DC'S, LOADED CSG W/ 10#. JETTED & CLEANED PITS RIG DOWN DRILLING RIG.
11-23-97	RDMO NAVAJO WEST 25
11-24-97	COMPLETION- MOVE IN RIG UP NAVAGO WEST RIG #36. SHUT IN CSG. PRESSURE @ 11:00 WAS 0 PSI. RIG DOWN WELL HEAD CAP. NIPPLE UP BOPE. RIH TO 5232.37'. TAG UP ON PACKER. POH TO 5069.37'. SIFN
11-25-97	SHUT IN PRESSURE @ 7:30 WAS 0 PSI. SPACE OUT 2.875" TBG. RIH TO 5132' RIH WITH 4.375" ON/OFF TOOL AND 2.875" TBG. TO 5132'. SPACE OUT AND LATCH UP ON PACKER. NIPPLE DOWN BOPW. NIPPLE UP WELL HEAD. RETV. TBG. PLUG. FLOW WELL. SIFN.
11-26-97	SHUT IN TBG. PRESSURE @ 7:30 WAS 400 PSI. RIG DOWN MOVE OFF NAVAJO WEST RIG #36. TEMPORARILY SUSPEND COMPLETION OPERATIONS. FLOW WELL DOWN PRODUCTION LINE.

WELL FLOWING.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR MOBIL PRODUCING TX & NM, INC.

OPERATOR ACCT. NO. N

ADDRESS P. O. BOX 633
MIDLAND, TX 79702

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
			43-037-31720	RATHERFORD 21-24		21	T41S	R24E	SAN JUAN	10-30-97	11-26-97
WELL 1 COMMENTS:											
WELL 2 COMMENTS:											
WELL 3 COMMENTS:											
WELL 4 COMMENTS:											
WELL 5 COMMENTS:											

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

Signature SHIRLEY HOUCHINS

ENV & REG TECHNICIAN

Title

5-7-98

Date

Phone No. (915) 688-2585

Mobil

San Juan County
Utah
Ratherford Unit
RU 21-24 - MWD Survey

SURVEY REPORT

13 February, 1998

sperry-sun
DRILLING SERVICES
A DRESSER COMPANY

Survey Ref: svy2398

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
Gyro							
0.00	0.000	0.000	0.00	0.00 N	0.00 E	0.00	
200.00	0.180	175.820	200.00	0.31 S	0.02 E	-0.22	0.090
400.00	0.230	36.730	400.00	0.30 S	0.29 E	-0.41	0.192
600.00	0.290	48.640	600.00	0.35 N	0.91 E	-0.47	0.040
800.00	0.460	284.750	799.99	0.89 N	0.51 E	0.18	0.333
1000.00	0.690	279.420	999.98	1.29 N	1.46 W	1.94	0.118
1200.00	0.460	284.130	1199.97	1.68 N	3.42 W	3.70	0.117
1400.00	0.390	279.720	1399.97	2.00 N	4.87 W	5.01	0.039
1600.00	0.290	341.830	1599.97	2.59 N	5.70 W	6.03	0.181
1800.00	0.460	288.730	1799.96	3.33 N	6.62 W	7.21	0.184
2000.00	0.500	317.270	1999.96	4.23 N	7.97 W	8.82	0.120
2200.00	0.030	76.740	2199.95	4.88 N	8.51 W	9.66	0.258
2400.00	1.100	168.770	2399.94	3.01 N	8.09 W	8.13	0.551
2600.00	1.270	170.570	2599.90	1.06 S	7.35 W	4.95	0.087
2800.00	0.700	154.930	2799.87	4.35 S	6.47 W	2.16	0.313
3000.00	0.670	132.560	2999.85	6.25 S	5.09 W	-0.12	0.134
3200.00	0.750	187.010	3199.84	8.34 S	4.39 W	-2.00	0.327
3400.00	0.360	203.780	3399.83	10.21 S	4.80 W	-2.89	0.209
3600.00	0.730	186.720	3599.82	12.05 S	5.20 W	-3.76	0.200
3800.00	0.470	183.000	3799.81	14.14 S	5.40 W	-4.95	0.131
4000.00	0.860	167.150	3999.80	16.42 S	5.11 W	-6.64	0.214
4200.00	0.610	162.630	4199.78	18.90 S	4.45 W	-8.74	0.128
4400.00	1.030	161.830	4399.76	21.62 S	3.58 W	-11.16	0.210
4600.00	0.660	136.740	4599.74	24.17 S	2.23 W	-13.83	0.257
4800.00	0.580	125.210	4799.73	25.59 S	0.61 W	-15.98	0.074
5000.00	0.210	211.900	4999.72	26.49 S	0.02 E	-17.05	0.303
5200.00	0.190	216.390	5199.72	27.07 S	0.37 W	-17.12	0.013
5271.00	0.350	76.760	5270.72	27.11 S	0.22 W	-17.25	0.718
MWD Survey							
5316.00	0.350	76.760	5315.72	27.05 S	0.04 E	-17.42	0.000
5325.00	3.200	318.000	5324.72	26.86 S	0.10 W	-17.19	37.581
5335.00	6.500	313.780	5334.68	26.26 S	0.69 W	-16.35	33.170
5345.00	10.400	312.550	5344.57	25.25 S	1.77 W	-14.88	39.040
5355.00	14.600	311.970	5354.33	23.80 S	3.37 W	-12.72	42.018
5365.00	18.700	311.620	5363.91	21.89 S	5.51 W	-9.85	41.012
5375.00	22.800	311.390	5373.26	19.54 S	8.16 W	-6.31	41.008
5385.00	26.700	311.220	5382.34	16.78 S	11.30 W	-2.13	39.006
5395.00	30.800	311.100	5391.10	13.62 S	14.93 W	2.68	41.004
5405.00	35.000	309.700	5399.50	10.10 S	19.06 W	8.11	42.680

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
5415.00	39.200	308.500	5407.47	6.30 S	23.74 W	14.14	42.617
5425.00	43.600	307.200	5414.97	2.25 S	28.97 W	20.75	44.830
5435.00	47.700	307.000	5421.96	2.07 N	34.67 W	27.89	41.025
5445.00	51.400	306.600	5428.45	6.62 N	40.76 W	35.48	37.125
5455.00	56.500	305.700	5434.33	11.39 N	47.29 W	43.55	51.516
5465.00	62.600	305.200	5439.39	16.39 N	54.31 W	52.14	61.152
5475.00	68.500	304.900	5443.53	21.61 N	61.76 W	61.20	59.063
5485.00	73.900	306.600	5446.75	27.14 N	69.44 W	70.64	56.345
5495.00	79.100	309.600	5449.09	33.14 N	77.08 W	80.35	59.618
5525.00	92.100	314.400	5451.38	53.11 N	99.25 W	110.17	46.164
5563.79	91.100	311.900	5450.30	79.63 N	127.54 W	148.89	6.939
5595.53	89.300	313.900	5450.19	101.23 N	150.79 W	180.58	8.477
5627.36	89.000	313.100	5450.66	123.14 N	173.87 W	212.35	2.684
5659.19	89.000	313.000	5451.22	144.87 N	197.13 W	244.13	0.314
5690.99	89.000	312.800	5451.77	166.51 N	220.42 W	275.88	0.629
5722.05	89.600	313.100	5452.15	187.67 N	243.15 W	306.90	2.160
5753.78	90.100	312.600	5452.24	209.25 N	266.41 W	338.59	2.229
5784.75	90.800	313.000	5451.99	230.29 N	289.14 W	369.52	2.603
5816.62	92.300	313.300	5451.13	252.08 N	312.38 W	401.33	4.800
5848.45	92.700	313.900	5449.74	274.01 N	335.41 W	433.07	2.264
5880.21	91.600	314.000	5448.55	296.04 N	358.26 W	464.73	3.478
5911.98	89.400	312.600	5448.27	317.82 N	381.38 W	496.44	8.208
5943.62	87.000	310.200	5449.27	338.73 N	405.09 W	528.05	10.724
5975.52	86.800	308.900	5450.99	359.01 N	429.65 W	559.90	4.117
6007.27	86.500	308.800	5452.85	378.90 N	454.34 W	591.59	0.996
6039.04	87.100	307.000	5454.62	398.38 N	479.37 W	623.29	5.964
6070.79	88.200	306.100	5455.92	417.27 N	504.85 W	654.96	4.475
6102.55	88.900	305.800	5456.73	435.91 N	530.55 W	686.63	2.398
6134.38	89.200	306.600	5457.25	454.71 N	556.24 W	718.38	2.684
6166.23	89.700	307.000	5457.56	473.79 N	581.74 W	750.18	2.010
6198.09	89.800	307.500	5457.70	493.07 N	607.10 W	782.00	1.600
6229.84	89.600	307.900	5457.87	512.49 N	632.22 W	813.73	1.409
6261.60	89.100	307.000	5458.23	531.80 N	657.43 W	845.45	3.241
6293.37	88.400	305.900	5458.92	550.67 N	682.98 W	877.15	4.103
6324.37	88.100	305.400	5459.87	568.73 N	708.16 W	908.05	1.880
6356.09	87.800	305.900	5461.00	587.20 N	733.92 W	939.66	1.837
6387.98	88.300	305.200	5462.09	605.73 N	759.85 W	971.43	2.696
6419.75	89.700	305.600	5462.64	624.13 N	785.74 W	1003.10	4.583
6451.64	90.100	305.900	5462.70	642.77 N	811.62 W	1034.90	1.568
6483.39	90.700	306.300	5462.47	661.47 N	837.27 W	1066.57	2.271
6514.99	91.200	307.000	5461.95	680.33 N	862.62 W	1098.12	2.722
6546.81	90.800	307.700	5461.39	699.63 N	887.91 W	1129.90	2.533
6578.60	90.800	308.600	5460.95	719.27 N	912.91 W	1161.67	2.831
6610.32	89.500	308.600	5460.87	739.06 N	937.70 W	1193.38	4.098
6642.07	90.200	308.800	5460.95	758.91 N	962.48 W	1225.12	2.293

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6673.87	90.400	308.800	5460.78	778.83 N	987.26 W	1256.91	0.629
6705.63	90.600	308.200	5460.51	798.60 N	1012.11 W	1288.66	1.991
6737.45	90.600	307.700	5460.17	818.17 N	1037.20 W	1320.46	1.571
6769.18	89.800	307.000	5460.06	837.42 N	1062.43 W	1352.15	3.350
6800.91	90.100	306.600	5460.09	856.43 N	1087.83 W	1383.83	1.576
6832.76	89.300	306.600	5460.26	875.42 N	1113.40 W	1415.62	2.512
6864.53	88.700	306.100	5460.81	894.25 N	1138.99 W	1447.32	2.458
6896.39	88.900	305.600	5461.48	912.90 N	1164.81 W	1479.09	1.690
6928.22	88.900	306.800	5462.09	931.70 N	1190.49 W	1510.85	3.769
6960.07	88.300	306.800	5462.87	950.77 N	1215.98 W	1542.64	1.884
6991.84	87.900	306.800	5463.92	969.79 N	1241.41 W	1574.34	1.259
7023.55	89.200	307.300	5464.72	988.89 N	1266.71 W	1606.00	4.392
7055.42	89.800	308.800	5465.00	1008.53 N	1291.80 W	1637.85	5.069
7087.13	90.000	309.100	5465.06	1028.46 N	1316.46 W	1669.55	1.137
7118.98	89.400	309.600	5465.22	1048.66 N	1341.09 W	1701.40	2.452
7150.06	90.300	310.200	5465.31	1068.59 N	1364.93 W	1732.48	3.480
7181.93	90.400	310.700	5465.11	1089.27 N	1389.19 W	1764.35	1.600
7213.72	90.400	311.200	5464.89	1110.11 N	1413.20 W	1796.13	1.573
7245.58	90.200	311.600	5464.72	1131.17 N	1437.09 W	1827.98	1.404
7276.54	89.800	311.200	5464.72	1151.65 N	1460.32 W	1858.93	1.827
7308.39	89.000	310.700	5465.06	1172.52 N	1484.37 W	1890.78	2.962
7340.25	89.300	308.900	5465.53	1192.91 N	1508.84 W	1922.63	5.727
7372.07	90.500	308.400	5465.58	1212.79 N	1533.69 W	1954.44	4.085
7403.70	89.500	307.700	5465.58	1232.28 N	1558.60 W	1986.05	3.859
7435.58	88.900	305.900	5466.03	1251.37 N	1584.13 W	2017.88	5.951
7467.32	91.100	306.300	5466.03	1270.07 N	1609.77 W	2049.54	7.045
7499.13	90.300	305.800	5465.64	1288.79 N	1635.49 W	2081.27	2.966
7530.88	89.600	305.200	5465.67	1307.23 N	1661.33 W	2112.93	2.904
7562.75	89.900	305.600	5465.81	1325.69 N	1687.31 W	2144.69	1.569
7594.45	91.400	307.500	5465.45	1344.57 N	1712.77 W	2176.33	7.636
7626.30	92.100	306.500	5464.48	1363.73 N	1738.20 W	2208.12	3.831
7657.00	93.500	304.100	5462.98	1381.44 N	1763.22 W	2238.68	9.042
7688.76	91.700	304.600	5461.54	1399.34 N	1789.41 W	2270.25	5.882
7720.61	91.600	305.700	5460.62	1417.67 N	1815.44 W	2301.97	3.466
7752.53	90.400	306.100	5460.06	1436.39 N	1841.30 W	2333.81	3.963
7783.50	87.900	305.400	5460.52	1454.48 N	1866.43 W	2364.69	8.383
7815.32	88.900	305.900	5461.41	1473.02 N	1892.27 W	2396.40	3.513
7847.13	90.300	308.200	5461.63	1492.18 N	1917.66 W	2428.16	8.464
7878.89	90.400	310.200	5461.44	1512.25 N	1942.27 W	2459.92	6.305
7910.64	88.800	310.300	5461.66	1532.76 N	1966.50 W	2491.67	5.049
7941.55	90.500	311.700	5461.85	1553.04 N	1989.82 W	2522.57	7.125
7973.28	88.900	311.900	5462.01	1574.19 N	2013.48 W	2554.28	5.082
8005.06	89.700	313.700	5462.40	1595.78 N	2036.79 W	2586.02	6.198
8036.00	90.200	314.900	5462.43	1617.39 N	2058.94 W	2616.87	4.202
8043.00	89.300	315.100	5462.46	1622.34 N	2063.89 W	2623.85	13.171

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8077.00	88.000	315.100	5463.26	1646.41 N	2087.88 W	2657.70	3.824

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 310.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 8077.00ft.,
The Bottom Hole Displacement is 2658.93ft., in the Direction of 308.258° (True).

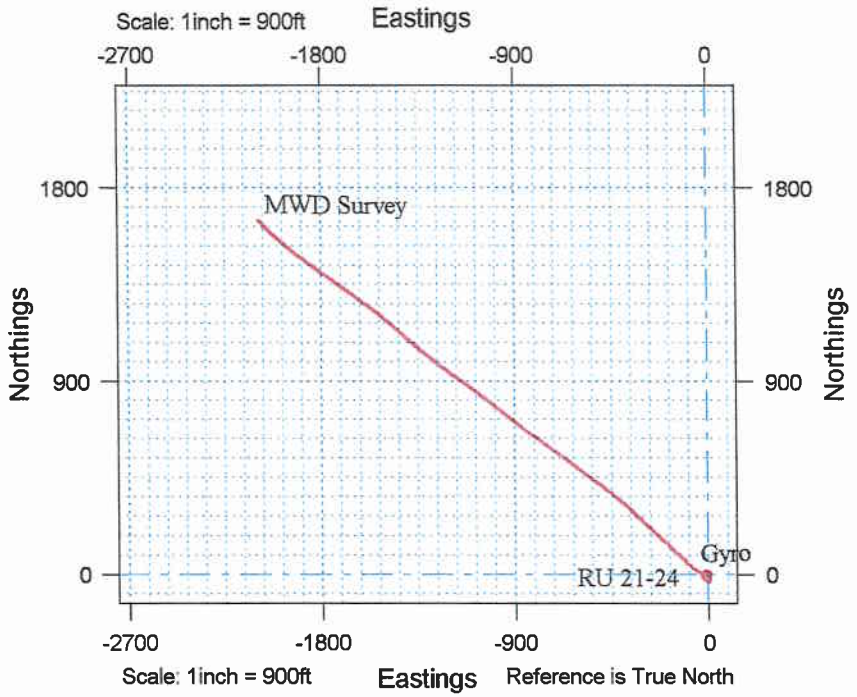
sperry-sun DRILLING SERVICES

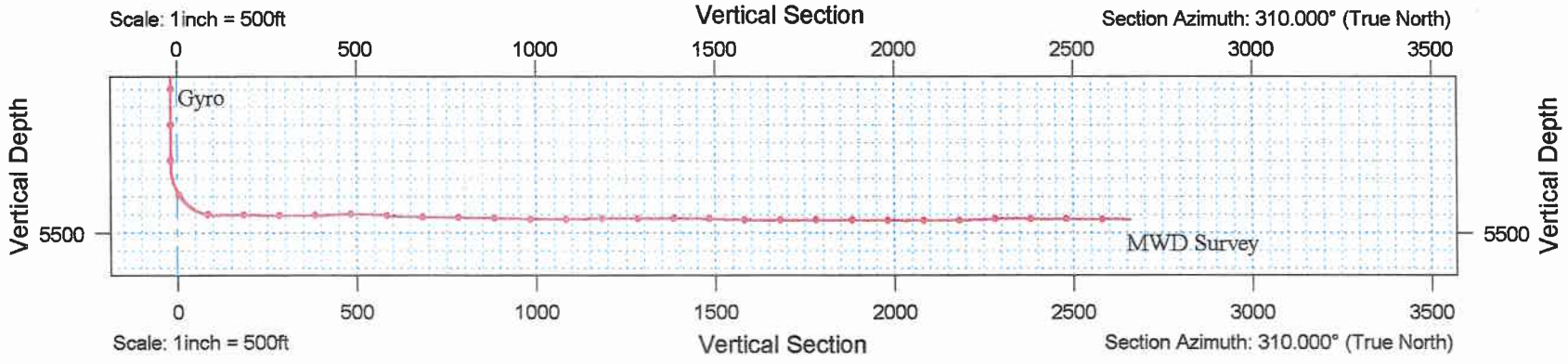
Mobil

DrillQuest

San Juan County
Utah
Ratherford Unit
RU 21-24 Leg #1

Mobil





Prepared:	Checked:	Approved:

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
6673.87	90.400	308.800	5460.78	778.83 N	987.26 W	1256.91	0.629
6705.63	90.600	308.200	5460.51	798.60 N	1012.11 W	1288.66	1.991
6737.45	90.600	307.700	5460.17	818.17 N	1037.20 W	1320.46	1.571
6769.18	89.800	307.000	5460.06	837.42 N	1062.43 W	1352.15	3.350
6800.91	90.100	306.600	5460.09	856.43 N	1087.83 W	1383.83	1.576
6832.76	89.300	306.600	5460.26	875.42 N	1113.40 W	1415.62	2.512
6864.53	88.700	306.100	5460.81	894.25 N	1138.99 W	1447.32	2.458
6896.39	88.900	305.600	5461.48	912.90 N	1164.81 W	1479.09	1.690
6928.22	88.900	306.800	5462.09	931.70 N	1190.49 W	1510.85	3.769
6960.07	88.300	306.800	5462.87	950.77 N	1215.98 W	1542.64	1.884
6991.84	87.900	306.800	5463.92	969.79 N	1241.41 W	1574.34	1.259
7023.55	89.200	307.300	5464.72	988.89 N	1266.71 W	1606.00	4.392
7055.42	89.800	308.800	5465.00	1008.53 N	1291.80 W	1637.85	5.069
7087.13	90.000	309.100	5465.06	1028.46 N	1316.46 W	1669.55	1.137
7118.98	89.400	309.600	5465.22	1048.66 N	1341.09 W	1701.40	2.452
7150.06	90.300	310.200	5465.31	1068.59 N	1364.93 W	1732.48	3.480
7181.93	90.400	310.700	5465.11	1089.27 N	1389.19 W	1764.35	1.600
7213.72	90.400	311.200	5464.89	1110.11 N	1413.20 W	1796.13	1.573
7245.58	90.200	311.600	5464.72	1131.17 N	1437.09 W	1827.98	1.404
7276.54	89.800	311.200	5464.72	1151.65 N	1460.32 W	1858.93	1.827
7308.39	89.000	310.700	5465.06	1172.52 N	1484.37 W	1890.78	2.962
7340.25	89.300	308.900	5465.53	1192.91 N	1508.84 W	1922.63	5.727
7372.07	90.500	308.400	5465.58	1212.79 N	1533.69 W	1954.44	4.085
7403.70	89.500	307.700	5465.58	1232.28 N	1558.60 W	1986.05	3.859
7435.58	88.900	305.900	5466.03	1251.37 N	1584.13 W	2017.88	5.951
7467.32	91.100	306.300	5466.03	1270.07 N	1609.77 W	2049.54	7.045
7499.13	90.300	305.800	5465.64	1288.79 N	1635.49 W	2081.27	2.966
7530.88	89.600	305.200	5465.67	1307.23 N	1661.33 W	2112.93	2.904
7562.75	89.900	305.600	5465.81	1325.69 N	1687.31 W	2144.69	1.569
7594.45	91.400	307.500	5465.45	1344.57 N	1712.77 W	2176.33	7.636
7626.30	92.100	306.500	5464.48	1363.73 N	1738.20 W	2208.12	3.831
7657.00	93.500	304.100	5462.98	1381.44 N	1763.22 W	2238.68	9.042
7688.76	91.700	304.600	5461.54	1399.34 N	1789.41 W	2270.25	5.882
7720.61	91.600	305.700	5460.62	1417.67 N	1815.44 W	2301.97	3.466
7752.53	90.400	306.100	5460.06	1436.39 N	1841.30 W	2333.81	3.963
7783.50	87.900	305.400	5460.52	1454.48 N	1866.43 W	2364.69	8.383
7815.32	88.900	305.900	5461.41	1473.02 N	1892.27 W	2396.40	3.513
7847.13	90.300	308.200	5461.63	1492.18 N	1917.66 W	2428.16	8.464
7878.89	90.400	310.200	5461.44	1512.25 N	1942.27 W	2459.92	6.305
7910.64	88.800	310.300	5461.66	1532.76 N	1966.50 W	2491.67	5.049
7941.55	90.500	311.700	5461.85	1553.04 N	1989.82 W	2522.57	7.125
7973.28	88.900	311.900	5462.01	1574.19 N	2013.48 W	2554.28	5.082
8005.06	89.700	313.700	5462.40	1595.78 N	2036.79 W	2586.02	6.198
8036.00	90.200	314.900	5462.43	1617.39 N	2058.94 W	2616.87	4.202
8043.00	89.300	315.100	5462.46	1622.34 N	2063.89 W	2623.85	13.171

Continued...

Sperry-Sun Drilling Services

Survey Report for RU 21-24

Mobil
San Juan County

Utah
Ratherford Unit

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8077.00	88.000	315.100	5463.26	1646.41 N	2087.88 W	2657.70	3.824

All data is in feet unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to Well. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100ft.
Vertical Section is from Well and calculated along an Azimuth of 310.000° (True).

Based upon Minimum Curvature type calculations, at a Measured Depth of 8077.00ft.,
The Bottom Hole Displacement is 2658.93ft., in the Direction of 308.258° (True).

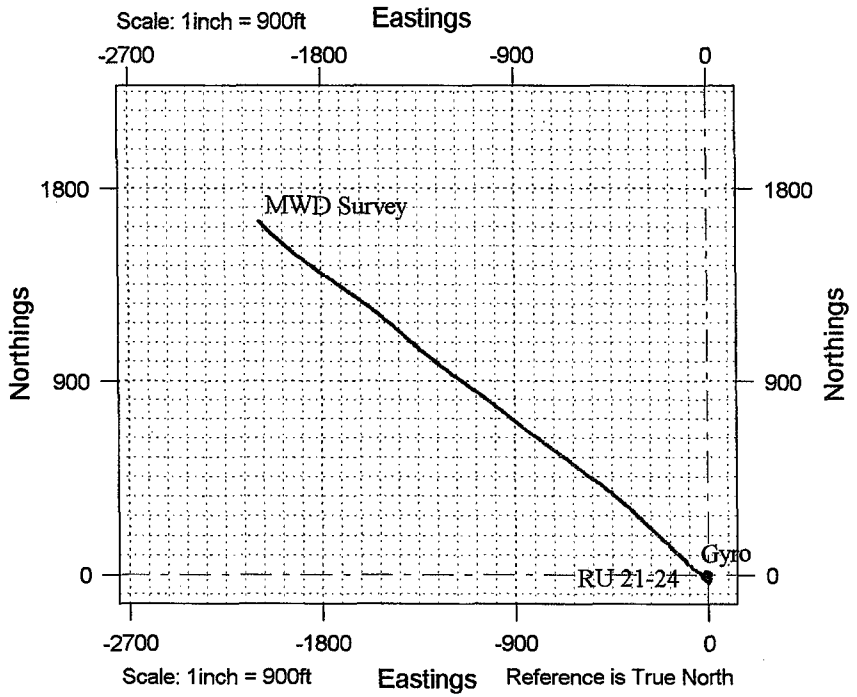
sperry-sun DRILLING SERVICES

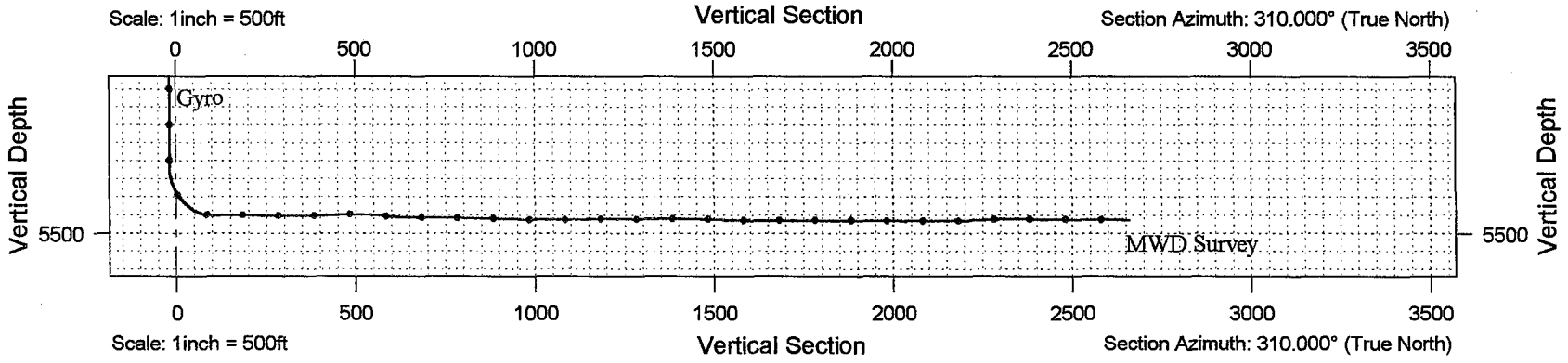
Mobil

DrillQuest™

San Juan County
Utah
Ratherford Unit
RU 21-24 Leg #1

Mobil





Prepared:	Checked:	Approved:

Form 3160-4
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0137
Expires: February 28, 1995

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-355

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO TRIBAL

7. UNIT AGREEMENT NAME: RATHERFORD UNIT

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other X SIDETRACK

8. FARM OR LEASE NAME, WELL NO.: RATHERFORD 21-24

2. NAME OF OPERATOR: MOBIL PRODUCING TX & NM INC.*
*MOBIL EXPLORATION & PRODUCING US INC. AS AGENT FOR MPTM

9. API WELL NO.: 43-037-31720

3. ADDRESS AND TELEPHONE NO.: P.O. Box 633, Midland TX 79702 (915) 688-2585

RECEIVED
MAY 11 1998
DIV. OF OIL, GAS & MINING

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 487' FNL & 2064' FWL
At top prod. interval reported below
At total depth: LAT #1A1/1646' FNL & 2088' FWL

10. FIELD AND POOL, OR WILDCAT: GREATER ANETH

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 21, T41S, R24E

14. PERMIT NO. | DATE ISSUED: 11-08-93 | 12. COUNTY OR PARISH: SAN JUAN | 13. STATE: UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10-30-97	11-22-97	11-26-97	4670' GR, 4683' KB	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
*#24	*#24		→	X	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION - TOP, BOTTOM, NAME (MD AND TVD)*: LAT #1A1 (5235-8077' TMD)(5325-5463' TVD) DSCR

25. WAS DIRECTIONAL SURVEY MADE: YES

26. TYPE ELECTRIC AND OTHER LOGS RUN: NO

27. WAS WELL CORED: NO

28. CASING RECORD (Report all strings set in well)

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	93'	17 1/2"	SURFACE / 200 SXS	NONE
9 5/8"	36#	1570'	12 1/4"	SURFACE / 475 SXS	NONE
7"	23#	5648'	7 7/8"	SURFACE / 1149 SXS	NONE
ORIGINAL	CASING	UNDISTURBED			

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	5132'	5131'

31. PERFORATION RECORD (Interval, size and number)
5325-8077' TMD
5325-5463' TVD

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5335'	SET CICR W/350 SXS CMT.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping - size and type of pump)	WELL STATUS (Producing or shut-in)
11-28-97	FLOWING	PRODUCING

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL - BBL.	GAS - MCF.	WATER - BBL.	GAS - OIL RATIO
11-29-97	24			620	184	57	302

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL - BBL.	GAS - MCF.	WATER - BBL.	OIL GRAVITY - API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS
DIRECTIONAL SURVEY

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED _____ TITLE SHIRLEY HOUCHINS/ENV & REG TECH DATE 5-7-98

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdicton.

ExxonMobil Production Compa
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

June 27, 2001

ExxonMobil
Production

Mr. Jim Thompson
State of Utah, Division of Oil, Gas and Mining
1549 West North Temple
Suite 1210
Salt Lake City, UT 84114-5801

Change of Name – Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Mr. Thompson

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

A copy of the Certification, Bond Rider and a list of wells are attached.

If you have any questions please feel free to call Joel Talavera at 713-431-1010

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

United States Department of the Interior

BUREAU OF INDIAN AFFAIRS
XXXXXXXXXXXXXXX
Navajo Area Office
NAVAJO REGION
P.O. Box 1060
Gallup, New Mexico 87305-1060

IN REPLY REFER TO:

RRES/543

AUG 30 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Charlotte H. Harper, Permitting Supervisor
Exxon Mobil Production Company
U. S. West
P. O. Box 4358
Houston, TX 77210-4358

Dear Ms. Harper:

This is to acknowledge receipt of your company's name change from Mobil Oil Corporation to ExxonMobil Oil Corporation effective June 1, 2001. The receipt of documents includes the Name Change Certification, current listing of Officers and Directors, Listing of Leases, Financial Statement, filing fees of $75.00 and a copy of the Rider for Bond Number 8027 31 97. There are no other changes.

Please note that we will provide copies of these documents to other concerned parties. If you need further assistance, you may contact Ms. Bertha Spencer, Realty Specialist, at (928) 871-5938.

Sincerely,

DENNIS DENETSONE

Regional Realty Officer

cc: BLM, Farmington Field Office w/enclosures
Navajo Nation Minerals Office, Attn: Mr. Akhtar Zaman, Director/w enclosures

MINERAL RESOURCES
ADM 1 BLM
NATV AM MIN COORD
SOLID MIN TEAM
PETRO MGMT TEAM 2
O & G INSPECT TEAM
ALL TEAM LEADERS
LAND RESOURCES
ENVIRONMENT
FILES

ExxonMobil Production Company
U.S. West
P.O. Box 4358
Houston, Texas 77210-4358

BK 7/12/2001

543

File

June 27, 2001

ExxonMobil
Production

Certified Mail
Return Receipt Requested

RECEIVED
#477
JUL 9 - 2001
Navajo Region Office
RES - Minerals Section

Ms. Genni Denetsone
United States Department of the Interior
Bureau of Indian Affairs, Navajo Region
Real Estate Services
P. O. Box 1060
Gallup, New Mexico 87305-1060
Mail Code 543

Change of Name –
Mobil Oil Corporation to
ExxonMobil Oil Corporation

Dear Ms. Denetsone:

Effective June 1, 2001, Mobil Oil Corporation (MOC) changed its name to ExxonMobil Oil Corporation (EMOC). This was a name change only; EMOC is the same corporation as Mobil Oil Corporation, but with a new name. No facility or other asset was transferred from one corporation to another by virtue of the name change. Specifically, EMOC will remain the owner and operator of its existing exploration and production oil and gas properties and facilities, as well as relevant permits.

There is no change to the name of Exxon Mobil Corporation, the ultimate shareholder of EMOC.

Please note the change of name of MOC to ExxonMobil Oil Corporation in your records pertaining to any MOC permits.

The Federal Identification Number for MOC (13-5401570) will remain the same for EMOC.

Attached is the Name Change Certification, Current listing of Officers and Directors, Filing Fee of $75/-, Listing of Leases, Financial Statement and a copy of the Rider for Bond number 8027 31 97. The original Bond Rider has been sent to Ms. Barbar Davis at your Washington Office.

If you have any questions , please contact Alex Correa at (713) 431-1012.

Very truly yours,

Charlotte H. Harper

Charlotte H. Harper
Permitting Supervisor

Attachments

RECEIVED
JUL 05 2001
NAVAJO REGION OFFICE
BRANCH OF REAL ESTATE SERVICES

ExxonMobil Production Company
a division of Exxon Mobil Corporation,
acting for ExxonMobil Oil Corporation

NOTE: Check forwarded to Ella Isosi

Bureau of Indian Affairs
Navajo Region Office
Attn: RRES - Mineral and Mining Section
P.O. Box 1060
Gallup, New Mexico 87305-1060

Gentlemen:

The current listing of officers and director of ExxonMobil Oil Corporation (Name of Corporation), of New York (State) is as follows:

OFFICERS

President	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039
Vice President	K.T. Koonce	Address	800 Bell Street Houston, TX 77002
Secretary	F.L. Reid	Address	5959 Las Colinas Blvd. Irving, TX 75039
Treasure	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039

DIRECTORS

Name	D.D. Humphreys	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	P.A. Hanson	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	T.P. Townsend	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	B.A. Maher	Address	5959 Las Colinas Blvd. Irving, TX 75039
Name	F.A. Risch	Address	5959 Las Colinas Blvd. Irving, TX 75039

Sincerely,

Alex Correa

Alex Correa

This is to certify that the above information pertaining to ExxonMobil Oil Corporation (Corporation) is trust and correct as evidenced by the records and accounts covering business for the State of Utah and in the custody of Corporation Service Company (Agent), Phone: 1 (800) 927-9800, whose business address is One Utah Center, 201 South Main Street, Salt Lake City, Utah 84111-2218

(CORPORATE SEAL)

Signature

AGENT AND ATTORNEY IN FACT

Title

SAL

CERTIFICATION

I, the undersigned Assistant Secretary of ExxonMobil Oil Corporation. (formerly Mobil Oil Corporation), a corporation organized and existing under the laws of the State of New York, United States of America, DO HEREBY CERTIFY, That, the following is a true and exact copy of the resolutions adopted by the Board of Directors on May 22, 2001:

CHANGE OF COMPANY NAME

WHEREAS, the undersigned Directors of the Corporation deem it to be in the best interest of the Corporation to amend the Certificate of Incorporation of the Corporation to change the name and principal office of the Corporation:

NOW THEREFORE BE IT RESOLVED, That Article 1st relating to the corporate name is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

FURTHER RESOLVED, That the amendment of the Corporation's Certificate of Incorporation referred to in the preceding resolutions be submitted to the sole shareholder of the Corporation entitled to vote thereon for its approval and, if such shareholder gives its written consent, pursuant to Section 803 of the Business Corporation Law of the State of New York, approving such amendment, the proper officers of the Corporation be, and they hereby are, authorized to execute in the name of the Corporation the Certificate of Amendment of Certificate of Incorporation, in the form attached hereto;

FURTHER RESOLVED, That the proper officers of the Corporation be and they hereby are authorized and directed to deliver, file and record in its behalf, the Certificate of Amendment of Certificate of Incorporation, and to take such action as may be deemed necessary or advisable to confirm and make effective in all respects the change of this Company's name to EXXONMOBIL OIL CORPORATION.

WITNESS, my hand and the seal of the Corporation at Irving, Texas, this 8th day of June, 2001.

S. A. Millican
Assistant Secretary

COUNTY OF DALLAS)
STATE OF TEXAS)
UNITED STATES OF AMERICA)
Sworn to and subscribed before me at Irving, Texas, U. S. A. on this the 8th day of June, 2001.

Janice M. Phillips
Notary Public

LISTING OF LEASES OF MOBIL OIL CORPORATION

	Lease Number
1)	14-20-0603-6504
2)	14-20-0603-6505
3)	14-20-0603-6506
4)	14-20-0603-6508
5)	14-20-0603-6509
6)	14-20-0603-6510
7)	14-20-0603-7171
8)	14-20-0603-7172A
9)	14-20-600-3530
10)	14-20-603-359
11)	14-20-603-368
12)	14-20-603-370
13)	14-20-603-370A
14)	14-20-603-372
15)	14-20-603-372A
16)	14-20-603-4495
17)	14-20-603-5447
18)	14-20-603-5448
19)	14-20-603-5449
20)	14-20-603-5450
21)	14-20-603-5451

6/1/01

CHUBB GROUP OF INSURANCE COMPANIES

[illegible] South, Suite 1400, Houston, Texas 77027-3301
[illegible] (713) 297-4600 • Facsimile: (713) 297-4750

NM Bond

FEDERAL INSURANCE COMPANY RIDER
to be attached to and form a part of

BOND NO 8027 31 97
wherein
Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc. is named as Principal and

FEDERAL INSURANCE COMPANY AS SURETY,

in favor of **United States of America, Department of the Interior Bureau of Indian Affairs**

in the amount of **$150,000.00**
bond date: 11/01/65

IT IS HEREBY UNDERSTOOD AND AGREED THAT effective **June 1, 2001** the name of the Principal is changed

FROM: **Mobil Oil Corporation and Mobil Exploration and Producing U.S., Inc.**

TO : **ExxonMobil Oil Corporation**

All other terms and conditions of this Bond are unchanged.

Signed, sealed and dated this 12th of June, 2001.

ExxonMobil Oil Corporation
By :

FEDERAL INSURANCE COMPANY
By: Mary Pierson
Mary Pierson, Attorney-in-fact

Chubb Surety	POWER OF ATTORNEY	Federal Insurance Company Vigilant Insurance Company Pacific Indemnity Company	Attn.: Surety Department 15 Mountain View Road Warren, NJ 07059

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint R.F. Bobo, Mary Pierson, Philana Berros, and Jody E. Specht of Houston, Texas----------

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 10th day of May, 2001.

Kenneth C. Wendel, Assistant Secretary

Frank E. Robertson, Vice President

STATE OF NEW JERSEY }
County of Somerset } ss.

On this 10th day of May, 2001, before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By-Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with Frank E. Robertson, and knows him to be Vice President of said Companies; and that the signature of Frank E. Robertson, subscribed to said Power of Attorney is in the genuine handwriting of Frank E. Robertson, and was thereto subscribed by authority of said Boards and in deponent's presence.

Karen A. Price
Notary Public State of New Jersey
No. 2231647
Commission Expires Oct. 28, 2004

Notary Public

CERTIFICATION

Extract from the By-Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

"All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys-In-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

(i) the foregoing extract of the By-Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U. S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U. S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this 12th day of June, 2001.

Kenneth C. Wendel, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY
Telephone (908) 903-3485 Fax (908) 903-3656 e-mail: surety@chubb.com

15-10-0225 (Ed. 4-99) CONSENT

CSC 5184334741 06/01 '01 08:46 NO.410 03/05

CSC 06/01 '01 09:06 NO.135 02/04

F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

CERTIFICATE OF INCORPORATION

OF

MOBIL OIL CORPORATION

(Under Section 805 of the Business Corporation Law)

Pursuant to the provisions of Section 805 of the Business Corporation Law, the undersigned President and Secretary, respectively, of Mobil Oil Corporation hereby certify:

FIRST: That the name of the corporation is MOBIL OIL CORPORATION and that said corporation was incorporated under the name of Standard Oil Company of New York.

SECOND: That the Certificate of Incorporation of the corporation was filed by the Department of State, Albany, New York, on the 10th day of August, 1882.

THIRD: That the amendments to the Certificate of Incorporation effected by this Certificate are as follows:

(a) Article 1st of the Certificate of Incorporation, relating to the corporate name, is hereby amended to read as follows:

"1st The corporate name of said Company shall be,

ExxonMobil Oil Corporation",

(b) Article 7th of the Certificate of Incorporation, relating to the office of the corporation is hereby amended to read as follows:

The office of the corporation within the State of New York is to be located in the County of Albany. The Company shall have offices at such other places as the Board of Directors may from time to time determine.

FOURTH: That the amendments to the Certificate of Incorporation were authorized by the Board of Directors followed by the holder of all outstanding shares entitled to vote on amendments to the Certificate of Incorporation by written consent of the sole shareholder dated May 22, 2001.

IN WITNESS WHEREOF, this Certificate has been signed this 22nd Day of May, 2001.

F. A. Risch, President

STATE OF TEXAS)
COUNTY OF DALLAS)

F. L. REID, being duly sworn, deposes and says that he is the Secretary of MOBIL OIL CORPORATION, the corporation mentioned and described in the foregoing instrument; that he has read and signed the same and that the statements contained therein are true.

F. L. REID, Secretary

SUBSCRIBED AND SWORN TO before me, the undersigned authority, on this the 22nd day of May, 2001.

[SEAL]

NOTARY PUBLIC, STATE OF TEXAS

JANICE M. PHILLIPS
MY COMMISSION EXPIRES
May 16, 2002

CSC 5184334741 06/01 '01 09:01 NO.411 02/02
CSC 06/01 '01 09:06 NO.159 04/04

F010601000187

CSC 45

CERTIFICATE OF AMENDMENT

OF

MOBIL OIL CORPORATION

Under Section 805 of the Business Corporation Law

SAC

100 cc

STATE OF NEW YORK
DEPARTMENT OF STATE
FILED JUN 01 2001
TAX $
BY: SAC

Filed by: EXXONMOBIL CORPORATION
(Name)

5959 Las Colinas Blvd.
(Mailing address)

Irving, TX 75039-2298
(City, State and Zip code)

Cust Ref # 1655781MPT

RECEIVED
JUL 05 2001
TAX SECTION
BUREAU OF REAL ESTATE SERVICES

010601000195

State of New York }
Department of State } *ss:*

I hereby certify that the annexed copy has been compared with the original document in the custody of the Secretary of State and that the same is a true copy of said original.

Witness my hand and seal of the Department of State on JUN 01 2001

STATE OF NEW YORK
DEPARTMENT OF STATE
EXCELSIOR

Special Deputy Secretary of State

DOS-1266 (7/00)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. GLH
2. CDW ✓
3. FILE

Change of Operator (Well Sold) — Designation of Agent

X Operator Name Change — Merger

The operator of the well(s) listed below has changed, effective: **06-01-2001**

FROM: (Old Operator):	**TO:** (New Operator):
MOBIL EXPLORATION & PRODUCTION	EXXONMOBIL OIL CORPORATION
Address: P O BOX DRAWER "G"	Address: U S WEST P O BOX 4358
CORTEZ, CO 81321	HOUSTON, TX 77210-4358
Phone: 1-(970)-564-5212	Phone: 1-(713)-431-1010
Account No. N7370	Account No. N1855

CA No. **Unit:** **RATHERFORD**

WELL(S)

NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
RATHERFORD UNIT 19-13	19-41S-24E	43-037-31719	6280	INDIAN	OW	P
RATHERFORD UNIT 19-24 (MULTI-LEG)	19-41S-24E	43-037-31754	6280	INDIAN	OW	P
RATHERFORD UNIT 20-44	20-41S-24E	43-037-30915	6280	INDIAN	OW	P
20-13	20-41S-24E	43-037-30917	6280	INDIAN	OW	P
20-24	20-41S-24E	43-037-30918	6280	INDIAN	OW	P
20-22	20-41S-24E	43-037-30930	6280	INDIAN	OW	P
RATHERFORD UNIT 20-33	20-41S-24E	43-037-30931	6280	INDIAN	OW	S
RATHERFORD UNIT 20-11	20-41S-24E	43-037-31049	6280	INDIAN	OW	S
RATHERFORD UNIT 20-31	20-41S-24E	43-037-31050	6280	INDIAN	OW	P
RATHERFORD UNIT 20-42	20-41S-24E	43-037-31051	6280	INDIAN	OW	P
RATHERFORD 20-68	20-41S-24E	43-037-31591	6280	INDIAN	OW	P
RATHERFORD 20-66	20-41S-24E	43-037-31592	6280	INDIAN	OW	P
21-23	21-41S-24E	43-037-13754	6280	INDIAN	OW	S
21-32	21-41S-24E	43-037-15755	6280	INDIAN	OW	S
21-34	21-41S-24E	43-037-15756	6280	INDIAN	OW	S
RATHERFORD UNIT 21-11	21-41S-24E	43-037-31052	6280	INDIAN	OW	S
RATHERFORD UNIT 21-24	21-41S-24E	43-037-31720	6280	INDIAN	OW	P
RATHERFORD UNIT 21-77	21-41S-24E	43-037-31758	6280	INDIAN	OW	S
RATHERFORD UNIT 28-11	28-41S-24E	43-037-30446	6280	INDIAN	OW	P
29-34	29-41S-24E	43-037-15340	6280	INDIAN	OW	P

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 06/29/2001
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 06/29/2001
3. The new company has been checked through the **Department of Commerce, Division of Corporations Database on:** 04/09/2002
4. Is the new operator registered in the State of Utah: YES Business Number: 579865-0143
5. If **NO**, the operator was contacted contacted on: N/A

6. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BIA-06/01/01

7. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 06/01/2001

8. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A

9. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 04/15/2002
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 04/15/2002
3. Bond information entered in RBDMS on: N/A
4. Fee wells attached to bond in RBDMS on: N/A

STATE WELL(S) BOND VERIFICATION:

1. State well(s) covered by Bond Number: N/A

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: N/A

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: 80273197

FEE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number N/A
2. The **FORMER** operator has requested a release of liability from their bond on: N/A
The Division sent response by letter on: N/A

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

COMMENTS:

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator: **Exxon Mobil Oil Corporation**

3a. Address: **P.O. Box 4358, Houston, TX 77210-4358**

3b. Phone No. *(include area code)*: **281-654-1936**

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*: **SE/SW 0487' FSL & 2064' FWL, Sec 21, T41S, R24E**

5. Lease Serial No.: **1420603355**

6. If Indian, Allottee or Tribe Name: **Ship Rock**

7. If Unit or CA/Agreement, Name and/or No.: **UTU68931A**

8. Well Name and No.: **Ratherford 21-24**

9. API Well No.: **43-037-31720-00-S1**

10. Field and Pool, or Exploratory Area: **Aneth**

11. County or Parish, State: **San Juan County, UT**

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☑ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Well was returned to production 03/14/06 after repairing rod pump equipment. Well test 3/26/06: 24 bopd, 199 bwpd, 7 mcfg.

RECEIVED

APR 2 8 2006

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*: **Tiffany Stebbins** Title **Staff Office Assistant**

Signature: Tiffany Stebbins Date **04/21/2006**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office _____

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **6/1/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N1855-ExxonMobil Oil Corporation	N2700-Resolute Natural Resources Company
PO Box 4358	1675 Broadway, Suite 1950
Houston, TX 77210-4358	Denver, CO 80202
Phone: 1 (281) 654-1936	Phone: 1 (303) 534-4600

CA No. **Unit:** **RATHERFORD**

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/21/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/24/2006
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/7/2006
4. Is the new operator registered in the State of Utah: YES Business Number: 5733505-0143
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: requested

6b. Inspections of LA PA state/fee well sites complete on: n/a

6c. Reports current for Production/Disposition & Sundries on: ok

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA not yet
8. **Federal and Indian Units:** The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
9. **Federal and Indian Communization Agreements ("CA"):** The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/12/2006

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/22/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/22/2006
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: 6/22/2006
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: n/a
2. Indian well(s) covered by Bond Number: PA002769
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:	See attached list
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	Navajo Tribe
7. UNIT or CA AGREEMENT NAME:	Ratherford Unit
8. WELL NAME and NUMBER:	See attached list
9. API NUMBER:	Attached
10. FIELD AND POOL, OR WILDCAT:	Greater Aneth

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Unit Agreement

2. NAME OF OPERATOR: Resolute Natural Resources Company N2700

3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1950 CITY Denver STATE CO ZIP 80202 PHONE NUMBER: (303) 534-4600

4. LOCATION OF WELL
FOOTAGES AT SURFACE: See attached list COUNTY: San Juan
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
_____	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective June 1, 2006 Exxon Mobil Oil Corporation resigns as operator of the Ratherford Unit. Also effective June 1, 2006 Resolute Natural Resources Company is designated as successor operator of the Ratherford Unit.

A list of affected producing and water source wells is attached. A separate of affected injection wells is being submitted with UIC Form 5, Transfer of Authority to Inject.

As of the effective date, bond coverage for the affected wells will transfer to BIA Bond # PA002769.

NAME (PLEASE PRINT) Dwight E Mallory TITLE Regulatory Coordinator

SIGNATURE Dwight E Mallory DATE 4/20/2006

(This space for State use only)

APPROVED 6/27/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

RECEIVED
APR 24 2006
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ship Rock

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

7. UNIT or CA AGREEMENT NAME: UTU68931A

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Ratherford

2. NAME OF OPERATOR: ExxonMobil Oil Corporation N1855

9. API NUMBER: attached

3. ADDRESS OF OPERATOR: P.O. Box 4358 CITY Houston STATE TX ZIP 77210-4358

PHONE NUMBER: (281) 654-1936

10. FIELD AND POOL, OR WILDCAT: Aneth

4. LOCATION OF WELL

FOOTAGES AT SURFACE:

COUNTY: San Juan

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/1/2006	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☑ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
Date of work completion:	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER:
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

ExxonMobil Oil Corporation is transferring operatorship of Greater Aneth field, Ratherford lease to Resolute Natural Resources Company. All change of operator notices should be made effective as of 7:00 AM MST on June 1, 2006.

Attached please find a listing of producers and water source wells included in the transfer.

NAME (PLEASE PRINT) Laurie Kilbride TITLE Permitting Supervisor

SIGNATURE Laurie B. Kilbride DATE 4/19/2006

(This space for State use only)

APPROVED 6/27/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

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APR 21 2006
DIV. OF OIL, GAS & MINING

(5/2000)

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	01-14	430373116200S1	Producing	1420603246A	1	41S	23E	SWSW	0660FSL	0660FWL
Ratherford	01-34	430371638501S1	SI	1420603246A	1	41S	23E	SWSE	1133FSL	1980FEL
Ratherford	11-41	430373154400S1	Producing	1420603246A	11	41S	23E	NENE	0860FNL	0350FEL
Ratherford	11-43	430373162201S1	Producing	1420603246A	11	41S	23E	NESE	1980FSL	0660FEL
Ratherford	12-12	430373119000S1	Producing	1420603246A	12	41S	23E	SWNW	1850FNL	0660FWL
Ratherford	12-14	430371584400S1	SI	1420603246A	12	41S	23E	SWSW	0660FSL	4622FEL
Ratherford	12-21	430373120100S1	Producing	1420603246A	12	41S	23E	NENW	0660FNL	1980FWL
Ratherford	12-23	430371584601S1	Producing	1420603246A	12	41S	23E	NESW	1958FSL	3300FEL
Ratherford	12-32	430373120300S1	Producing	1420603246A	12	41S	23E	SWNE	1820FNL	1820FEL
Ratherford	12-34	430373112600S1	Producing	1420603246A	12	41S	23E	SWSE	0675FSL	1905FEL
Ratherford	12-43	430373120200S1	SI	1420603246A	12	41S	23E	NESE	2100FSL	0660FEL
Ratherford	13-12	430373112701S1	Producing	1420603247A	13	41S	23E	SWNW	1705FNL	0640FWL
Ratherford	13-14	430373158900S1	Producing	1420603247A	13	41S	23E	SWSW	0660FSL	0660FWL
Ratherford	13-21	430373112801S1	SI	1420603247A	13	41S	23E	NENW	0660FNL	1920FWL
Ratherford	13-23	430373112900S1	Producing	1420603247A	13	41S	23E	NESW	1980FSL	1930FWL
Ratherford	13-34	430373113001S1	Producing	1420603247A	13	41S	23E	SWSE	0660FSL	1980FEL
Ratherford	13-41	430371585601S1	Producing	1420603247A	13	41S	23E	NENE	660FNL	660FEL
Ratherford	13-43	430373113100S1	Producing	1420603247A	13	41S	23E	NESE	1700FSL	0960FEL
Ratherford	14-32	430371585801S1	Producing	1420603247A	14	41S	23E	SWNE	2130FNL	1830FEL
Ratherford	14-41	430373162300S1	Producing	1420603247A	14	41S	23E	NENE	0521FNL	0810FEL
Ratherford	24-32	430373159300S1	Producing	1420603247A	24	41S	23E	SWNE	2121FNL	1846FEL
Ratherford	24-41	430373113200S1	Producing	1420603247A	24	41S	23E	NENE	0660FNL	0710FEL
Ratherford	17-11	430373116900S1	Producing	1420603353	17	41S	24E	NWNW	1075FNL	0800FWL
Ratherford	17-13	430373113301S1	Producing	1420603353	17	41S	24E	NWSW	2100FSL	0660FWL
Ratherford	17-22	430373117001S1	Producing	1420603353	17	41S	24E	SENW	1882FNL	1910FWL
Ratherford	17-24	430373104400S1	Producing	1420603353	17	41S	24E	SESW	0720FSL	1980FWL
Ratherford	17-31	430373117800S1	Producing	1420603353	17	41S	24E	NWNE	0500FNL	1980FEL
Ratherford	17-33	430373113400S1	Producing	1420603353	17	41S	24E	NWSE	1980FSL	1845FEL
Ratherford	17-42	430373117700S1	Producing	1420603353	17	41S	24E	SENE	1980FNL	0660FEL
Ratherford	17-44	430371573201S1	Producing	1420603353	17	41S	24E	SESE	0660FSL	0660FEL
Ratherford	18-11	430371573300S1	SI	1420603353	18	41S	24E	NWNW	0720FNL	0730FWL
Ratherford	18-13	430371573401S1	Producing	1420603353	18	41S	24E	NWSW	1980FSL	0500FWL
Ratherford	18-22	430373123600S1	Producing	1420603353	18	41S	24E	SENW	2200FNL	2210FWL
Ratherford	18-24	430373107900S1	Producing	1420603353	18	41S	24E	SESW	0760FSL	1980FWL
Ratherford	18-31	430373118101S1	Producing	1420603353	18	41S	24E	NWNE	0795FNL	2090FEL
Ratherford	18-33	430373113501S1	Producing	1420603353	18	41S	24E	NWSE	1870FSL	1980FEL
Ratherford	18-42	430373118200S1	Producing	1420603353	18	41S	24E	SENE	2120FNL	0745FEL
Ratherford	18-44	430373104500S1	SI	1420603353	18	41S	24E	SESE	0660FSL	0660FEL
Ratherford	19-11	430373108000S1	Producing	1420603353	19	41S	24E	NWNW	0660FNL	0660FWL
Ratherford	19-13	430373171900S1	Producing	1420603353	19	41S	24E	NWSW	1980FSL	0660FWL
Ratherford	19-22	430373104601S1	Producing	1420603353	19	41S	24E	SENW	1840FNL	1980FWL
Ratherford	19-24	430373175401S1	Producing	1420603353	19	41S	24E	SESW	0600FSL	1980FWL
Ratherford	19-31	430373104701S1	Producing	1420603353	19	41S	24E	NWNE	510FNL	1980FEL
Ratherford	19-33	430373104800S1	Producing	1420603353	19	41S	24E	NWSE	1980FSL	1980FEL
Ratherford	19-42	430373091600S1	Producing	1420603353	19	41S	24E	SENE	1880FNL	0660FEL
Ratherford	19-44	430373108100S1	Producing	1420603353	19	41S	24E	SESE	0660FSL	0660FEL
Ratherford	19-97	430373159600S1	Producing	1420603353	19	41S	24E	SENE	2562FNL	0030FEL
Ratherford	20-11	430373104900S1	Producing	1420603353	20	41S	24E	NWNW	0500FNL	0660FWL
Ratherford	20-13	430373091700S1	Producing	1420603353	20	41S	24E	NWSW	2140FSL	0500FWL
Ratherford	20-22	430373093000S1	Producing	1420603353	20	41S	24E	SENW	2020FNL	2090FWL
Ratherford	20-24	430373091800S1	Producing	1420603353	20	41S	24E	SESW	0820FSL	1820FWL

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	20-31	430373105001S1	Producing	1420603353	20	41S	24E	NWNE	0660FNL	1880FEL
Ratherford	20-33	430373093100S1	Producing	1420603353	20	41S	24E	NWSE	1910FSL	2140FEL
Ratherford	20-42	430373105100S1	Producing	1420603353	20	41S	24E	SENE	1980FNL	0660FEL
Ratherford	20-44	430373091501S1	Producing	1420603353	20	41S	24E	SESE	0620FSL	0760FEL
Ratherford	20-66	430373159201S1	Producing	1420603353	20	41S	24E	SWNW	1369FNL	1221FWL
Ratherford	20-68	430373159100S1	Producing	1420603353	20	41S	24E	NWSW	1615FSL	1276FWL
Ratherford	15-12	430371571501S1	Producing	1420603355	15	41S	24E	SWNW	1820FNL	0500FWL
Ratherford	15-22	430373044900S1	SI	1420603355	15	41S	24E	SENW	1980FNL	2050FWL
Ratherford	15-32	430371571700S1	Producing	1420603355	15	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	15-33	430371571800S1	Producing	1420603355	15	41S	24E	NWSE	1650FSL	1980FEL
Ratherford	15-41	430371571900S1	TA	1420603355	15	41S	24E	NENE	0660FNL	0660FEL
Ratherford	15-42	430373044800S1	Producing	1420603355	15	41S	24E	SENE	2020FNL	0820FEL
Ratherford	16-13	430373116801S1	Producing	1420603355	16	41S	24E	NWSW	1980FSL	660FWL
Ratherford	16-32	430371572300S1	Producing	1420603355	16	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	16-41	430371572500S1	Producing	1420603355	16	41S	24E	NENE	0660FNL	0660FEL
Ratherford	16-77	430373176800S1	Producing	1420603355	16	41S	24E	NESW	2587FSL	2410FWL
Ratherford	21-23	430371375400S1	Producing	1420603355	21	41S	24E	NESW	1740FSL	1740FWL
Ratherford	21-24	430373172001S1	SI	1420603355	21	41S	24E	SESW	487FSL	2064FWL
Ratherford	21-32	430371575500S1	SI	1420603355	21	41S	24E	SWNE	1880FNL	1980FEL
Ratherford	21-77	430373175801S1	SI	1420603355	21	41S	24E	NWSE	2511FSL	2446FEL
Ratherford	07-11	430373116300S1	Producing	1420603368	7	41S	24E	NWNW	0660FNL	0710FWL
Ratherford	07-13	430373116400S1	Producing	1420603368	7	41S	24E	NWSW	2110FSL	0740FWL
Ratherford	07-22	430373116500S1	Producing	1420603368	7	41S	24E	SENW	1980FNL	1980FWL
Ratherford	07-24	430373116600S1	Producing	1420603368	7	41S	24E	SESW	0880FSL	2414FWL
Ratherford	07-44	430373118900S1	SI	1420603368	7	41S	24E	SESE	0737FSL	0555FEL
Ratherford	08-12	430371599100S1	Producing	1420603368	8	41S	24E	SWNW	1909FNL	0520FWL
Ratherford	08-21	430371599300S1	Producing	1420603368	8	41S	24E	NENW	0616FNL	1911FWL
Ratherford	08-23	430371599400S1	Producing	1420603368	8	41S	24E	NESW	1920FSL	2055FWL
Ratherford	08-32	430371599500S1	Producing	1420603368	8	41S	24E	SWNE	1980FNL	1980FEL
Ratherford	08-34	430371599600S1	Producing	1420603368	8	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	04-34	430371616400S1	Producing	14206034035	4	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	11-14	430371616700S1	Producing	14206034037	11	41S	24E	SWSW	0660FSL	0660FWL
Ratherford	09-34	430371571100S1	SI	14206034043	9	41S	24E	SWSE	0660FSL	1980FEL
Ratherford	10-12	430371571200S1	Producing	14206034043	10	41S	24E	SWNW	1980FNL	0660FWL
Ratherford	10-14	430371571300S1	Producing	14206034043	10	41S	24E	SWSW	0510FSL	0710FWL
Ratherford	10-32	430371571400S1	TA	14206034043	10	41S	24E	SWNE	2080FNL	1910FEL
Ratherford	10-44	430373045100S1	TA	14206034043	10	41S	24E	SESE	0820FSL	0510FEL
Ratherford	29-11	430373105300S1	Producing	1420603407	29	41S	24E	NWNW	0770FNL	0585FWL
Ratherford	29-22	430373108200S1	Producing	1420603407	29	41S	24E	SENW	2130FNL	1370FWL
Ratherford	29-31	430373091401S1	Producing	1420603407	29	41S	24E	NWNE	0700FNL	2140FEL
Ratherford	29-33	430373093200S1	SI	1420603407	29	41S	24E	NWSE	1860FSL	1820FEL
Ratherford	29-34	430371534000S1	SI	1420603407	29	41S	24E	SWSE	0817FSL	2096FEL
Ratherford	29-42	430373093700S1	SI	1420603407	29	41S	24E	SENE	1850FNL	0660FEL
Ratherford	30-32	430371534200S1	Producing	1420603407	30	41S	24E	SWNE	1975FNL	2010FEL
Ratherford	28-11	430373044600S1	Producing	1420603409	28	41S	24E	NWNW	0520FNL	0620FWL

Ratherford Unit - Producer Well List

minus P&A's

Lease	Number	API #	Status	Lease #	Location					
					Sec	T	R	QTR/QTR	NSFoot	EWFoot
Ratherford	09-12	430371512600S1	Producing	14206035045	9	41S	24E	SWNW	1865FNL	0780FWL
Ratherford	09-14	430371512700S1	Producing	14206035046	9	41S	24E	SWSW	0695FSL	0695FWL
Ratherford	04-14	430371616300S1	Producing	14206035446	4	41S	24E	SWSW	0500FSL	0660FWL
Ratherford	03-12	430371562000S1	Producing	14206036506	3	41S	24E	SWNW	2140FNL	0660FWL

Water Source Wells (Feb 2006)

RU	S1	4303700001	Active
RU	S2	4303700002	Active
RU	S3	4303700003	Active
RU	S4	4303700004	Active
RU	S5	4303700005	Active
RU	S6	4303700006	Active
RU	S7	4303700007	Active
RU	S8	4303700008	Active
RU	S9	4303700009	Active
RU	S10	4303700010	Active
RU	S11	4303700011	Active
RU	S12	4303700012	Active
RU	S13	4303700013	Active
RU	S14	4303700014	Active
RU	S16	4303700016	Active
RU	S17	4303700017	Active

Sundry Number: 76138 API Well Number: 43037317200000

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
14-20-603-355

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
NAVAJO

7.UNIT or CA AGREEMENT NAME:
RATHERFORD

1. TYPE OF WELL
Oil Well

8. WELL NAME and NUMBER:
RATHERFORD UNIT 21-24

2. NAME OF OPERATOR:
RESOLUTE NATURAL RESOURCES

9. API NUMBER:
43037317200000

3. ADDRESS OF OPERATOR:
1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535

PHONE NUMBER:
303 534-4600 Ext

9. FIELD and POOL or WILDCAT:
GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0487 FSL 2064 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESW Section: 21 Township: 41.0S Range: 24.0E Meridian: S

COUNTY:
SAN JUAN

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/10/2016	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Rod Repair

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Resolute Natural Resources respectfully submits this sundry as notice of a Rod Repair on the above well. Attached are the procedures and schematic

Accepted by the Utah Division of Oil, Gas and Mining

Date: November 09, 2016

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Erin Joseph	303 573-4886	Sr. Regulatory Analyst

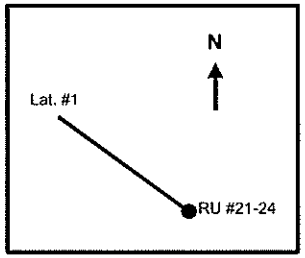
SIGNATURE	DATE
N/A	11/7/2016

RECEIVED: Nov. 07, 2016

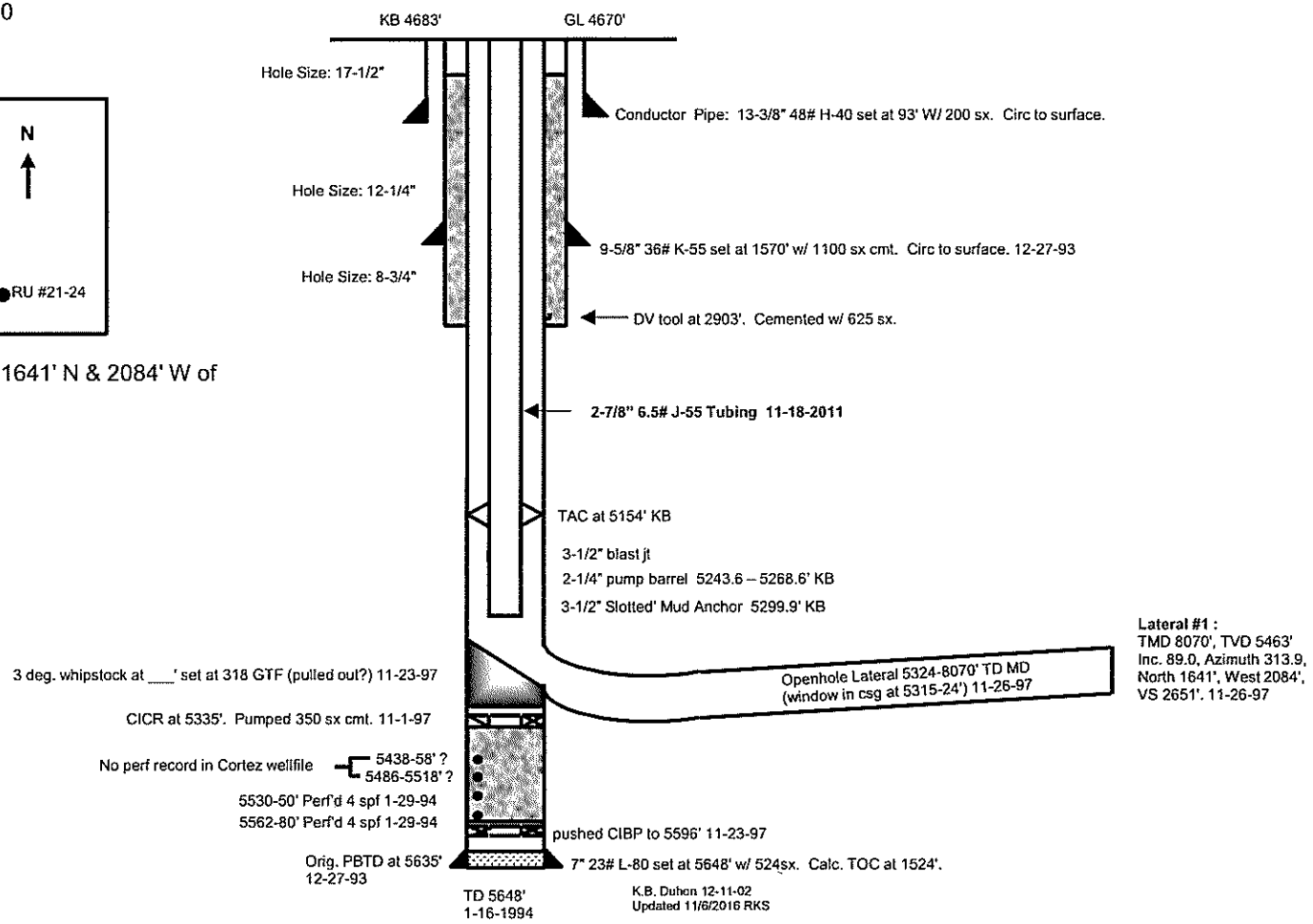
Procedure
Horsley Witten: No.
1. MIRU WSU, LOTO, 2. Pressure test tubing to 1000 psig. Previous test passed. Shallow part indicated. 3. Kill well as necessary. Fish rods X plunger as necessary. 4. POOH with rods and plunger. Call Virgil or Nate to inspect rods. 5. RU swabbing equipment. Swab on tubing to clear any solids. Take samples if solids are present. 6. If well is productive and clear of solids, rerun plunger and rods. 7. If solids are present and production cannot be re-established, additional steps will be developed. 10. Long stroke pump to test for good pumping action. 11. Leave enough polished rod for operators to correctly space pump as required. 12. Notify the Area Production Supervisor that well is ready to return to production. 13. RDMOL. Hook up appropriate chemical treatment.

RATHERFORD UNIT #21-24
GREATER ANETH FIELD
Surface Loc: 487' FSL & 2063' FWL
SEC 21-T41S-R24E
SAN JUAN COUNTY, UTAH
API 43-037-31720

PRODUCER



BHL of Lateral: 1641' N & 2084' W of Surface Location



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
14-20-603-355

SUNDRY NOTICES AND REPORTS ON WELLS

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6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
NAVAJO

7.UNIT or CA AGREEMENT NAME:
RATHERFORD

1. TYPE OF WELL
Oil Well

8. WELL NAME and NUMBER:
RATHERFORD UNIT 21-24

2. NAME OF OPERATOR:
RESOLUTE NATURAL RESOURCES

9. API NUMBER:
43037317200000

3. ADDRESS OF OPERATOR:
1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535

PHONE NUMBER:
303 534-4600 Ext

9. FIELD and POOL or WILDCAT:
GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0487 FSL 2064 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESW Section: 21 Township: 41.0S Range: 24.0E Meridian: S

COUNTY:
SAN JUAN

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☑ SUBSEQUENT REPORT Date of Work Completion: 11/15/2016	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☑ OTHER	OTHER: Rod Repair

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Resolute Natural Resources respectfully submits this sundry as notice that the Rod Repair on the above well was completed on 11/15/2016 according to previously approved procedures

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
November 29, 2016

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Erin Joseph	303 573-4886	Sr. Regulatory Analyst
SIGNATURE		**DATE**
N/A		11/22/2016

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

FORM 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-603-355

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NAVAJO

7.UNIT or CA AGREEMENT NAME: RATHERFORD

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: RATHERFORD UNIT 21-24

2. NAME OF OPERATOR: RESOLUTE NATURAL RESOURCES

9. API NUMBER: 43037317200000

3. ADDRESS OF OPERATOR: 1700 Lincoln Street, Suite 2800 , Denver, CO, 80203 4535

PHONE NUMBER: 303 534-4600 Ext

9. FIELD and POOL or WILDCAT: GREATER ANETH

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0487 FSL 2064 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESW Section: 21 Township: 41.0S Range: 24.0E Meridian: S

COUNTY: SAN JUAN

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 1/12/2017	☐ ACIDIZE	☐ ALTER CASING	✓ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Resolute proposes to move a workover rig to the Ratherford Unit 21-24 to repair a hole in the tubing. The proposed procedure/schematic is attached.

Accepted by the Utah Division of Oil, Gas and Mining

Date: January 17, 2017

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sherry Glass	303 573-4886	Sr Regulatory Analyst
SIGNATURE N/A		**DATE** 1/11/2017

RECEIVED: Jan. 11, 2017

RESOLUTE
NATURAL RESOURCES

RU 21-24 Producer - Hole in Tubing

Recommendation

The production engineer and operations staff at McElmo Creek Unit recommend moving a workover rig onto RU 21-24 to repair a hole in tubing. The workover is expected to restore production of 22 BOPD and 406 BWPD.

Job Scope

Job Scope includes: MIRU WSU, test tubing, TOOH with rods X pump, NU BOP and test, Release TAC and POOH with 2-7/8" Tubing - laying down. Run YB 2-7/8" Tubing with revised BHA. Run back rods X plunger. POP.

Acid planned? N; Change of tubing size? N; Paraffin expected? No

Work History

11/10/2016 MIRU. tbg 0# psi, left csg down f/.POOH w/ 82- 7/8" T-66 rods, parted pin break on jt 83 rod, load tbg w/12 bbl, test tbg to 1100# psi twice, lost 100# psi both time in 5 min. Note: No H2S Load & test tbg 1400# psi, dropped 150# psi in 20 min's. Fish rods. TOH w/ 82 rods, l/dn parted rod #83 w/ fishing tool, pulled 124 rods (total 207), 2- stab, 26' pull rod w/ 4' plunger, load tbg & test to 1000# psi again, dropped 100# psi in 15 min's. Rods good.Fish SV. TOH w/ rods, plunger & standing valve (SV showed some small cracks on the body of the valve cage.Released TAC. Test BOPE. TOH w/ 120 jts.It was recmnd to replace one rod above & one below parted rod & replace polish rod. Tally, tooh with 45 jnt,s, 7" tac, 2 jnt's, 3- 1/2 b/j, p/b and 3- 1/2 slotted m/a. Pick up 3- 1/2 slotted m/a, 2 - 1/4 pump barrel and GA, with s/v installed, 3- 1/2 b/jnt, 2 jnt's 2 7/8, 7" tac, tih with 165 jnt's. Test tubing every 40 jnt's @ 1500 ps. Set tac with 18,000# tension. Pick up 2-1/4 plunger, valve rod, 2 stabilizer subs, tih with 207- 7/8, 4 subs. POP.

Procedure

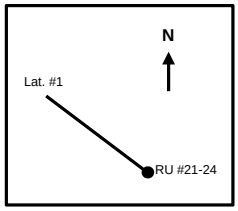
Horsley Witten: NO.

1. MIRU WSU, LOTO,
2. Pressure test tubing to 1000 psig. Prior test failed.
3. Kill well as necessary.
4. POOH with rods X pump. Stand back in derrick. Contact Tech Support: Virgil Holly or Nate Dee for rod inspection. Replace or re-run rods per inspection results. Pump was replaced in November - do not replace unless it tests bad.
5. ND WH. NU BOPE.
6. Release the TAC @ ~5150' KB. Install a packer. Pressure test BOPE.
7. TOOH with tubing. LD 3-1/2 SMA, 3-1/2 blast joints, and 2-7/8" tubing. Look for leak.
8. Call and notify Virgil Holly or Nate Dee to inspect tubing.
9. Replace tubing with 2-7/8" YB J-55. PU and stand back in derrick.
10. TIH with 2-7/8" orange peel joint; Four ft (4') 2-7/8" perf sub, 2-1/4 pump barrel with GA, Four (4) foot lifting sub, one joint 70XT 2-7/8", TAC, and 2-7/8 tubing to surface. Set TAC at ~ 5150 as before. **Note: Change in BHA.**
11. NDBOP, NUWH.
12. RIH with rods & 2-1/4" plunger. Contact Tech Support for pump and rod questions.
13. Long stroke pump to test for good pumping action.
14. Leave enough polished rod for operators to correctly space pump as required.
15. Notify the Area Production Supervisor Terry Lee or Alfred Redhouse that well is ready to return to production.
16. RDMOL. Hook up appropriate chemical treatment.

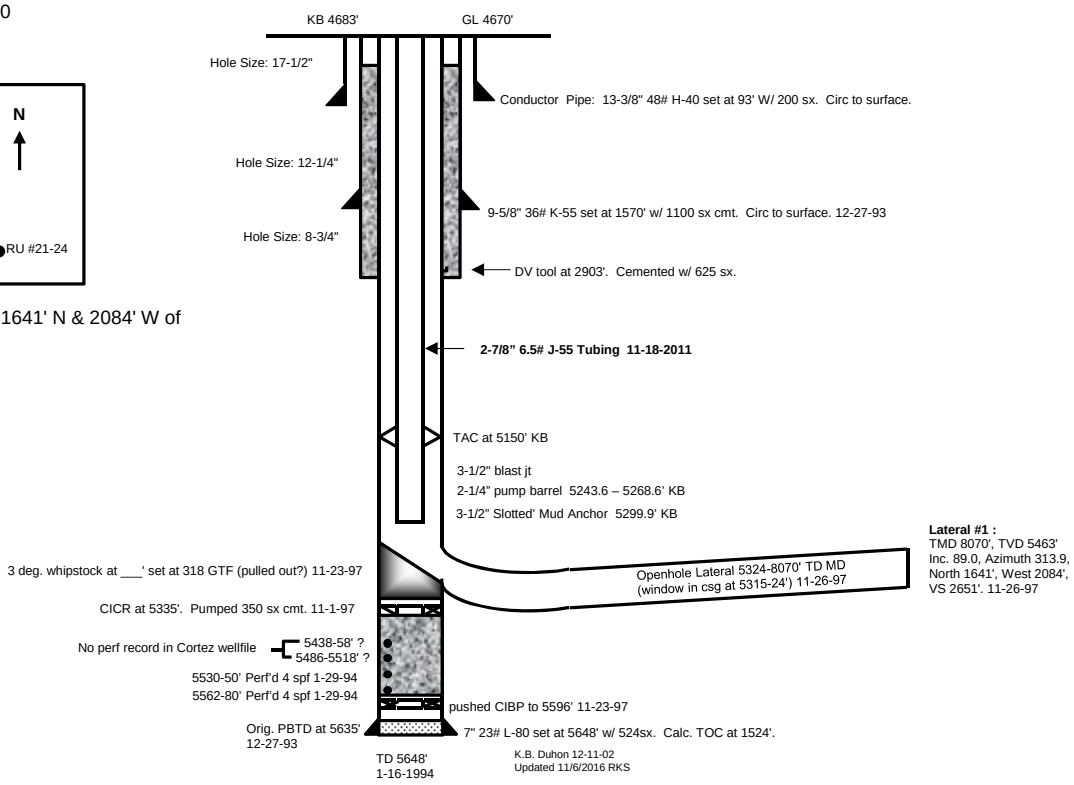
RECEIVED: Jan. 11, 2017

RATHERFORD UNIT #21-24
GREATER ANETH FIELD
Surface Loc: 487' FSL & 2063' FWL
SEC 21-T41S-R24E
SAN JUAN COUNTY, UTAH
API 43-037-31720

PRODUCER



BHL of Lateral: 1641' N & 2084' W of Surface Location



RECEIVED: Jan. 11, 2017